

Service Manual

GRUNDIG PASSION

TV

CUC 2059 D

ARGANTO 70
MW 70 – 500 IRDT

(G.CI 3952 GB / VNM)

ARGANTO 70
MW 70 – 505 IRDT / DPL

(G.CI 4052 GB / VNM)

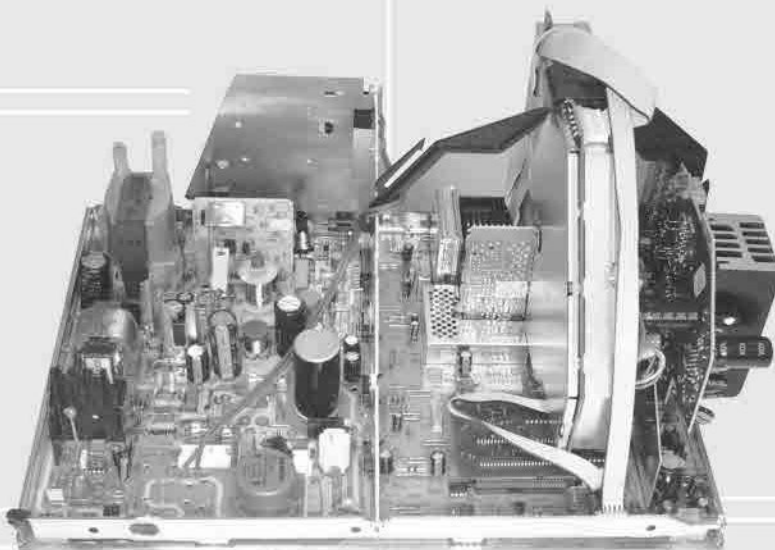
CUC 2058 D

ARGANTO 82
MW 82 – 500 IRDT

(G.CI 3752 GB / VNM)

ARGANTO 82
MW 82 – 505 IRDT / DPL

(G.CI 3852 GB / VNM)



Zusätzlich erforderliche
Unterlagen für den Komplettservice

Additionally required
Service Documents for the Complete Service

Service Manual

CUC 2058 D
CUC 2059 D

Materialnr./Part No.
72010 025 9000

Service Manual

Sicherheit
Safety

Materialnr./Part No.
72010 800 0000

Service Training

CUC 2000

Materialnr./Part No.
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© 72010 350 3600

Btx * 32700 #

Materialnummer
Part Number 72010 025 9000

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Es gelten die Vorschriften und Sicherheitshinweise gemäß dem Service Manual "Sicherheit", Materialnummer 72010 800 0000, sowie zusätzlich die eventuell abweichenden, landesspezifischen Vorschriften!



The regulations and safety instructions shall be valid as provided by the "Safety" Service Manual, part number 72010 800 0000, as well as the respective national deviations.

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Allgemeiner Teil

Meßgeräte

Beachten Sie bitte das Grundig Meßtechnik-Programm, das Sie unter folgender Adresse erhalten:

Grundig AG
Geschäftsbereich Instruments
Test- und Meßsysteme
Würzburger Str. 150
D-90766 Fürth
Tel.: 0911 / 703-4118
Fax: 0911 / 703-4130
eMail: instruments@grundig.de
Internet: <http://www.grundig-instruments.de>

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General Section

Test Equipment

Please note the Grundig Catalog "Test and Measuring Equipment" obtainable from:

Typenschild des Gerätes

Zusätzlich zum Gerätetyp und der Chassisbezeichnung enthält das Gerätetypenschild künftig eine sogenannte "Version number" z.B. VNA. Diese Kennzeichnung gibt Aufschluß über den technischen/mechanischen Fertigungsstand.

Für die Bestellung von Ersatzteilen sind deshalb folgende Angaben unbedingt erforderlich:

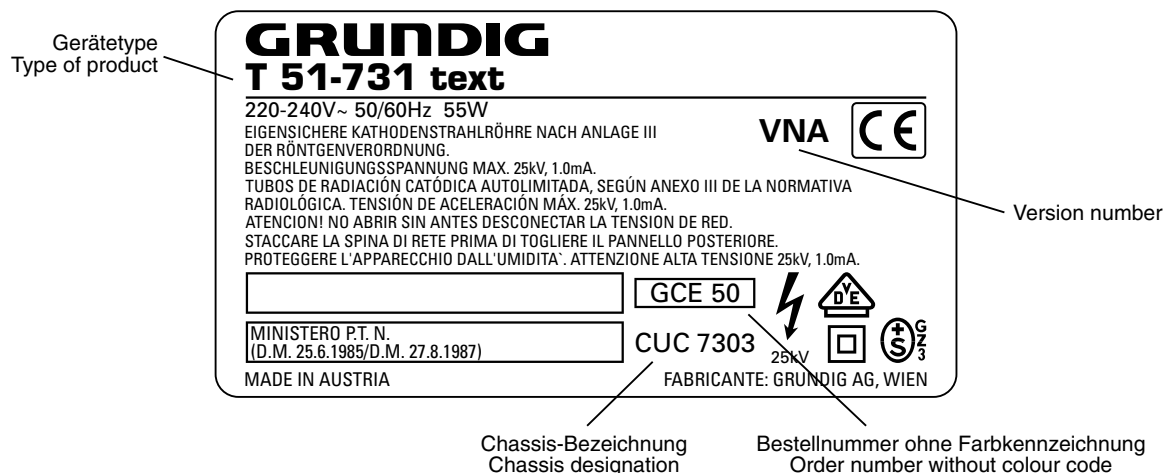
- Gerätetyp (z.B. "T 51-731 text")
- Chassis-Bezeichnung (z.B. "CUC 7303")
- Version number (z.B. "VNA")
- Materialnummer des Ersatzteils

Type Label on the set

In addition to the type of the TV set and the designation of the chassis, a so-called "Version number", e.g. VNA, is printed on the type label. This identification gives information on the technical/mechanical state of production.

Do not fail to give the following particulars when ordering spare parts:

- Type of product (e.g. "T 51-731 text")
- Chassis designation (e.g. "CUC 7303")
- Version number (e.g. "VNA")
- Part number of spare part



Modulübersicht / Module List

	Materialnr. Part Number	ARGANTO 70 MW 70-500 IRDT CUC 2059 D (VNM)	ARGANTO 70 MW 70-505 IRDT/DPL CUC 2059 D (VNM)	ARGANTO 82 MW 82-500 IRDT CUC 2058 D (VNM)	ARGANTO 82 MW 82-505 IRDT/DPL CUC 2058 D (VNM)
Bestell-Nr. Order No.		G.CI 3952 GB	G.CI 4052 GB	G.CI 3752 GB	G.CI 3852 GB
Chassis		29704 003 8600	29704 003 8700	29704 003 8800	29704 003 8900
Tuner PLL	29504 301 0100	●	●	●	●
Keyboard	29501 083 8300	●	●	●	●
Bildrohrplatte CRT Panel	29305 122 2500	●	●	●	●
Prozessorplatte Processor Board	29305 219 1300	●	●	●	●
Netzschalterplatte Main Switch Panel	29305 165 8300	●	●	●	●
Panorama View	29305 129 0400	●	●	●	●
YUV-Interface-Platte YUV Interface Board	29305 129 0600	●	●	●	●
IRDT-Baustein IRDT Module	29504 207 0100	●	●	●	●
Buchsenplatte Socket Board	29305 160 6300	—	●	—	●
nachrüstbar retrofitable	29305 160 6300	●	—	●	—
Dolby-Surround-Platte Dolby Surround Board	29504 104 8500	—	●	—	●
nachrüstbar retrofitable	29504 104 8500	●	—	●	—
NF-Verstärker AF Amplifier	29504 104 8400	●	—	●	—
TP 815 C	29642 061 1400	●	●	●	●

Technische Daten / Technical Data

	ARGANTO 70 MW 70-500 IRDT CUC 2059 D (VNM)	ARGANTO 70 MW 70-505 IRDT/DPL CUC 2059 D (VNM)	ARGANTO 82 MW 82-500 IRDT CUC 2058 D (VNM)	ARGANTO 82 MW 82-505 IRDT/DPL CUC 2058 D (VNM)
Bildröhre / Picture Tube				
Sichtbares Bild Visible picture	66cm	66cm	76cm	76cm
Bildschirmdiagonale Screen diagonal	16:9, 70cm (28") Videocolor, Super Flat, Black Line Invar	16:9, 70cm (28") Videocolor, Super Flat, Black Line Invar	16:9, 82cm (32") Videocolor, Super Flat, Black Line Invar	16:9, 82cm (32") Videocolor, Super Flat, Black Line Invar
Ablenkwinkel Deflection angle	104°	104°	104°	104°
Bildwechselfrequenz Vertical frequency	50Hz	50Hz	50Hz	50Hz
Elektronik / Electronic				
Programmspeicherplätze Programme positions	Analog 99 TV / Digital 99 TV + 3 AV	Analog 99 TV / Digital 99 TV + 3 AV	Analog 99 TV / Digital 99 TV + 3 AV	Analog 99 TV / Digital 99 TV + 3 AV
AV-Auswertung AV evaluation	auf jeden Programmplatz programmierbar / programmable for every programme position			
Tuner	PLL-Frequenz synthesizer tuning UHF/VHF (global pinning) PLL frequency synthesizer tuning UHF/VHF (global pinning)	PLL-Frequenz synthesizer tuning UHF/VHF (global pinning) PLL frequency synthesizer tuning UHF/VHF (global pinning)	PLL-Frequenz synthesizer tuning UHF/VHF (global pinning) PLL frequency synthesizer tuning UHF/VHF (global pinning)	PLL-Frequenz synthesizer tuning UHF/VHF (global pinning) PLL frequency synthesizer tuning UHF/VHF (global pinning)
TV-Normen TV-Standards	PAL, NTSC 4,43MHz, I	PAL, NTSC 4,43MHz, I	PAL, NTSC 4,43MHz, I	PAL, NTSC 4,43MHz, I
Stereo Systeme Stereo systems	Nicam 6,52MHz	Nicam 6,52MHz	Nicam 6,52MHz	Nicam 6,52MHz
Videotext / Digital MHEG Teletext / Digital MHEG	8 Seiten TOP/FLOF-text, VPS, WSS 8 pages TOP/FLOF-text, VPS, WSS	8 Seiten TOP/FLOF-text, VPS, WSS 8 pages TOP/FLOF-text, VPS, WSS	8 Seiten TOP/FLOF-text, VPS, WSS 8 pages TOP/FLOF-text, VPS, WSS	8 Seiten TOP/FLOF-text, VPS, WSS 8 pages TOP/FLOF-text, VPS, WSS
Musikleistung (ohne Dolby) Music power (without Dolby)	Stereo 2 X 15W, Subwoofer 30W	Stereo 2 X 15W, Subwoofer 30W	Stereo 2 X 15W, Subwoofer 30W	Stereo 2 X 15W, Subwoofer 30W
Musikleistung (mit Dolby Prologic) Music power (with Dolby Prologic)	—	Stereo 2 X 15W L/R, 30W Center, 15W rear, 30W Subwoofer,	—	Stereo 2 X 15W L/R, 30W Center, 15W rear, 30W Subwoofer,
Anschlüsse Front / Connections Front				
Kopfhörer Headphones	Stereo 3,5mm Klinkenbuchse, Lautstärke regelbar, individuelle Tonkanalwahl bei 2-Ton-Empfang Stereo 3.5mm jacksocket, adjustable volume, individual channel selection with dual-sound broadcasts			
Video IN	1 x Cinch	1 x Cinch	1 x Cinch	1 x Cinch
Audio IN	2 x Cinch	2 x Cinch	2 x Cinch	2 x Cinch
Anschlüsse Rückwand / Connections Rear Panel				
Euro AV 1 (schwarz/black)	FBAS Ein-/Ausgang, S-Video-Eingang, RGB Eingang CCVS in-/output, S-Video input, RGB input	FBAS Ein-/Ausgang, S-Video-Eingang, RGB Eingang CCVS in-/output, S-Video input, RGB input	FBAS Ein-/Ausgang, S-Video-Eingang, RGB Eingang CCVS in-/output, S-Video input, RGB input	FBAS Ein-/Ausgang, S-Video-Eingang, RGB Eingang CCVS in-/output, S-Video input, RGB input
Euro AV 2 (schwarz/black)	FBAS Ein-/Ausgang, S-Video-Eingang, RGB Eingang CCVS in-/output, S-Video input, RGB input	FBAS Ein-/Ausgang, S-Video-Eingang, RGB Eingang CCVS in-/output, S-Video input, RGB input	FBAS Ein-/Ausgang, S-Video-Eingang, RGB Eingang CCVS in-/output, S-Video input, RGB input	FBAS Ein-/Ausgang, S-Video-Eingang, RGB Eingang CCVS in-/output, S-Video input, RGB input
Interface	RS 232, RJ 11 Modem*	RS 232, RJ 11 Modem*	RS 232, RJ 11 Modem*	RS 232, RJ 11 Modem*
Netzteil / Mains Stage				
Netzspannung (Regelber.) Mains voltage (variable)	165...265V	165...265V	165...265V	165...265V
Netzfrequenz Mains frequency	50 / 60Hz	50 / 60Hz	50 / 60Hz	50 / 60Hz
Leistungsaufnahme Power consumption	ca. 100W	ca. 110W	ca. 105W	ca. 120W
Standby aktiv / passiv Standby active / passive	ca. 65W / ca. 6W	ca. 65W / ca. 6W	ca. 65W / ca. 6W	ca. 65W / ca. 6W

* GENEHMIGT für den Anschluß an die in der Bedienungsanleitung genannten Telekommunikationssysteme unter den darin genannten Bedingungen.



610107

* APPROVED for connection to telecommunication systems specified in the instructions for use subject to the conditions set out in them.

Sicherheits-Hinweise

Die in den Fernsehgeräten auftretende Röntgenstrahlung entspricht den Bestimmungen der Physikalisch-Technischen Bundesanstalt vom 8. Januar 1987.

Die Hochspannung für die Bildröhre und die damit auftretende Röntgenstrahlung ist abhängig von der exakten Einstellung der Netzteilspannung +A.

Nach jeder Reparatur im Netzteil oder in der Horizontalablenkung ist die Hochspannung zu messen und ggf. einzustellen.

Schutzschaltungen im Gerät dürfen nur kurzzeitig außer Betrieb gesetzt werden, um Folgeschäden am Chassis oder an der Bildröhre zu vermeiden.

Beim Austausch der Bildröhre dürfen nur die in den Ersatzteillisten vorgeschriebenen Typen verwendet werden.

Safety Advices

The X-radiation developing in the sets conforms to the X-radiation Regulations (January 8, 1987), issued by the Physikalisch-Technische Bundesanstalt (federal physio-technical institution).

The high tension for the picture tube and thus the developing X-radiation depends on the precise adjustment of the +A power supply.

After every repair of the power supply unit or the horizontal deflection stage it is imperative that the EHT for the picture tube is checked and re-adjusted if necessary.

To avoid consequential damages to the chassis or the picture tube the integrated protective circuits are allowed to be put out of operation only for a short time.

When replacing the picture tube use only the types specified in the spare parts lists.

D

Servicehinweise

Chassisausbau

Bevor Sie die Chassis-Verbindungsleitungen lösen, muß die Leitungsverlegung zu den einzelnen Baugruppen wie Netzschalterplatte, Bedieneinheit, Bildrohrplatte, Ablenkeinheit oder Lautsprecher beachtet werden.

Nach erfolgter Reparatur ist es notwendig, die Leitungsführung wieder in den werksseitigen Zustand zu versetzen, um evtl. spätere Ausfälle oder Störungen zu vermeiden.

Netzkabel

Diese Geräte dürfen nur mit dem Original-Netzanschlußkabel mit integrierter Entstördrossel betrieben werden. Dieses Netzkabel verhindert Störungen aus dem Netz und ist Bestandteil der Gerätezulassung. Im Ersatzfall bestellen Sie bitte ausschließlich das Netzkabel laut Ersatzteilliste.

GB

Service Notes

Disassembly of the chassis

Before disconnecting the chassis connecting leads observe the way they are routed to the individual assemblies like the mains switch panel, keyboard control panel, picture tube panel, deflection unit or loudspeaker.

On completion of the repairs the leads must be laid out as originally fitted at the factory to avoid later failures or disturbances.

Mains cable

The TV receiver must only be operated with an original mains connecting cable with an interference suppressor choke integrated in the mains plug. This mains cable prevents interference from the mains supply and is part of the product approval. For replacement please order exclusively the mains connecting cable specified in the spare parts list.

F

Information pour la maintenance

Démontage de chassis

Avant de défaire les connecteurs du châssis princip, il y a lieu de repérer auparavant les liaisons correspondant à chaque platine comme par exemple le C.I. Inter secteur, le C.I. Commande, le C.I. Tube, le bloc déviation ou les haut-parleurs.

A la fin de l'intervention, les connexions doivent être remises dans leur position d'origine afin d'éviter par après d'éventuelles défaillances ou perturbations.

Cable dereseau

Ces appareils ne peuvent être utilisés qu'avec un câble de connexion original de réseau avec bobine antiparasite intégré dans la fiche de secteur. Ce câble de réseau empêche des perturbations de réseau et est partie de l'autorisation d'appareil. Si nécessaire commandez uniquement le câble de réseau selon la liste de pièces détachées.

I

Nota di servizio

Smontaggio del telaio

Prima di sfilare i cavi di collegamento col telaio è necessario osservare la disposizione originaria degli stessi verso le singole parti come la piastra alimentazione, l'unità comandi, la piastra cinescopio, il giogo o l'altoparlante.

Dopo la riparazione è necessario che gli ancoraggi e le guide garantiscano la disposizione dei cavi analogamente a quella data in fabbrica e ciò per evitare disturbi o danni nel tempo.

Cavo rete

Gli apparecchi devono essere messi in funzione solo con il cavo originale il collegamento di rete e la sua spina di rete deve essere munita di una bobina d'induttanza. In causa di sostituzione ordinate solo il cavo di alimentatore che corrisponde alla lista degli accessori.

E

Nota de servicio

Desmontaje del chassis

Antes de desconectar las conexiones del Chassis hay que observar la dirección de dichas conexiones a los distintos grupos de construcción como la placa de conmutación de red, unidad de control, placa del zócalo del tubo de imagen, unidad de deflexión o altavoces.

Después de haber realizado la reparación y para evitar fallos o perturbaciones posteriores es necesario reponer las conexiones tal como fueron instaladas originalmente en fábrica.

Cable de red

El aparato solo se puede usar con el cable de red original con choque antiparásito integrado en el enchufe de red. Este cable de red evita perturbaciones de la red y es parte de la autorización del aparato. En caso necesario puede pedir el cable de red según lista de piezas de repuestos.

D Schaltplansymbole **GB** Circuit Diagram Symbols **F** Symboles schéma

I Simboli sullo schema **E** Símbolos en los esquemas

	Feinabst. + / Fine tuning + / Réglage fine + / Sint. fine + / Sint. fina +	B/50	Blau - Signal - 50Hz vert., 15625Hz hor. / Blue signal - 50Hz vert., 15625Hz hor. / Signal bleu - 50Hz vert., 15625Hz hor. / Segnale blu - 50Hz vert., 15625Hz hor. / Señal azul - 50Hz vert., 15625Hz hor.
	Feinabst. - / Fine tuning - / Réglage fine - / Sint. fine - / Sint. fina -	B/100	Blau-Signal -100Hz vert., 31250Hz hor. / Blue signal -100Hz vert., 31250Hz hor. / Signal bleu -100Hz vert., 31250Hz hor. / Segnale blu -100Hz vert., 31250Hz hor. / Señal azul -100Hz vert., 31250Hz hor.
	Lautstärke / Volume / Volume / Volume sonore / Volumen	B-Y / 50	B-Y -Signal - 50Hz vert., 15625Hz hor. / B-Y -Signal - 50Hz vert., 15625Hz hor. / Signal B-Y - 50Hz vert., 15625Hz hor. / Segnale B-Y - 50Hz vert., 15625Hz hor. / Señal B-Y - 50Hz vert., 15625Hz hor.
	Referenz Lautstärke / Volume ref. volt. / Tens. de réf. vol. sonore / Tens di rif. volume / Tens. ref. volumen	B-Y / 100	B-Y -Signal - 100Hz vert., 31250Hz hor. / B-Y -Signal - 100Hz vert., 31250Hz hor. / Signal B-Y - 100Hz vert., 31250Hz hor. / Segnale B-Y - 100Hz vert., 31250Hz hor. / Señal B-Y - 100Hz vert., 31250Hz hor.
	Balance / Balance / Balance / Balanciam. / Balance	C	Kanalwahl / Channel selection / Sélection de canaux / Selez. canale / Selección canal
	Suchlauf / Self seek / Recherche autom. / Sint. autom. / Sintonia automatica	CENTER	Mittelpunkt-Lautsprecher / Center loudspeaker / Haut-parleur de centre / Alto parlante punto centrale / Altavoz del centro
	Farbton / Tint / Teinte / Tinta / Tinte	CHIP ADR	Chip Adresse / Chip adress / Chip direction / Indiri. del chip / Dirección chip
	Helligkeit / Brightness / Luminosité / Luminosita / Brillo	CINCH AUDIO L	Ton-Signal Cinch links / Audio signal cinch left / Signal audio cinch gauche / Segnale audio cinch sinistra / Señal audio cinch izquierda
	Kontrast / Contrast / Contraste / Contrasto / Contraste	CINCH AUDIO R	Ton-Signal Cinch rechts / Audio signal cinch right / Signal audio cinch droit / Segnale audio cinch destra / Señal audio cinch derecha
	Farbkontrast / Colour contrast / Contraste des couleurs / Contrasto colore / Contraste de color	CHROMA	Chroma Signal / Chroma signal / Signal dégree / Croma segnale / Señal croma
	Schutzschaltung / Protection circuit / Circuit de sécurité / Circuito di protezione / Circuito de protección	CHROMA S-VHS	Chroma S-VHS-Signal / Chroma S-VHS-Signal / Signal dégree de S-VHS / Croma segnale S-VHS / Señal croma S-VHS
A-AM	Audio AM	CLK	Clock
ABK	(Burst Key): Burstaustastimpuls / Burst blanking pulse / Impulsion de suppress. de burst / Imp. di soppress. del burst / Imp. supresion burst	CL 1	
AUDIO	Ton-Signal / Audio signal / Signal audio / Segnale audio / Señal audio	CL 2	
AUDIO-L	Ton-Signal links / Audio signal left / Signal audio gauche / Segnale audio sinistra / Señal audio izquierda	CSY	Composite Sync. Imp. für VT / Composite sync pulse for TT / Imp. de sync. vidéo-composite pour TXT / Imp. hor. para Video Comp.
AUDIO-R	Ton-Signal rechts / Audio signal right / Signal audio droit / Segnale audio destra / Señal audio derecha	CS / 100	Kombiniertes Hor./vert. Sync. Signal 31250Hz/100Hz (Composite Sync.) / Combined hor./vert. sync signal 31250Hz/100Hz (Composite Sync) / Signal synchr. hor./vert. combiné 31250Hz/100Hz (Synchr. composé) / Segnale sincr. orizz./vert. 31250Hz/100Hz (Sincr. Composito) / Señal combinada sincr. hor./vert. 31250/100Hz (Sincr. compuesto)
AUDIO MAC	Tonsignal D2 Mac / Audio signal D2MAC / Signal audio D2MAC / Segnale audio D2MAC / Señal de sonido D2MAC /	DATA	Daten / Data / Données / Dati / Datos
AUDIO L-MAC	Tonsignal links D2 Mac / Audio signal left D2MAC / Signal audio gauche D2MAC / Segnale audio sinistro D2MAC / Señal de sonido izquierdo D2MAC	DL	Verzögerungsleitung / Delay line / Ligne à retard / Linea di ritardo / Linea de retardo
AUDIO R-MAC	Tonsignal rechts D2 MAC / Audio signal right D2MAC / Signal audio droit D2MAC / Segnale audio destro D2MAC / Señal de sonido derecho D2MAC /	ENA	Freigabe / Enable / Autorisation / Consenso / Habilitacion
AUDIO SUB	Audio Tieftöner / Audio sub woofer / Audio haut-parleur pour les frequences basses / Audio toni bassi / Audio sonido bajo	ENA ZF	Freigabe ZF / IF Enable / Validation FI / Consenso FI / Autorización FI
AUDIO TV	Audio-Signal FS Gerät / Audio signal TV set / Signal audio téléviseur / Segnale audio TV / Señal audio TV	ENABLE FT	Freigabe FT / Finetuning enable / Autorisation Réglage fin / Abilitaz. Sintonia fine / Habilitacion Sintonia fina
AUDIO VCR	Tonsignal VCR Gerät / Audio signal VCR unit / Signal audio magnetoscope / Segnale audio VCR / Señal audio VCR	ENABLE LED	Freigabe LED / LED enable / Autorisation LED / Abilitaz. LED / Habilitacion LED
A-ZF 1	Audio ZF 1 / Audio IF 1 / Audio FI 1 / Audio FI 1 / Audio FI 1	ENABLE TON	Freigabe Ton / Sound enable / Autorisation son / Abilitaz. audio / Habilitacion sonido
A-ZF 2	Audio ZF 2 / Audio IF 2 / Audio FI 2 / Audio FI 2 / Audio FI 2	EURO-AV AUDIO-L	Audio-Signal EURO-AV links / Audio signal EURO-AV left / Signal audio EURO-AV gauche / Segnale audio EURO-AV sinistra / Señal audio izquierda EURO-AV
B EXT	Blau-Signal / Blue signal / Signal bleu / Segnale blu / Señal azul	EURO-AV AUDIO-R	Audio-Signal EURO-AV rechts / Signal audio EURO-AV right / Signal audio EURO-AV droit / Segnale audio EURO-AV destra / Señal audio derecha EURO-AV
BB	Basisband / Baseband / Bande de base / Banda base / Banda base	EURO-AV VIDEO	Video-Signal EURO-AV / Video signal EURO-AV / Signal video EURO-AV / Segnale video EURO-AV / Señal video EURO-AV
B EXT	Blau-Signal extern / Signal blue external / Signal bleu externe / Segnale blu esterno / Señal azul externa	F	Farb-Signal / Chroma signal / Signal chroma / Segnale chroma / Señal croma
B OSD	OSD-Einblendung blau / OSD blue / Eblouissement OSD bleu / Visualizzazione OSD blu / Visualisacione OSD azul		
B PIP	Blau-Signal PIP / PIP Blue signal / Signal bleu PIP / Segnale blu PIP / Señal azul PIP		

FBAS	FBAS-Signal / CCVS signal / Signal vidéo composite / Segnale video composito / señal video compuesta	IR	Infrarot-Signal / Signal infrared / Signal infra-rouge / Segnale infrarosso / Señal infrarojo.
FBAS CINCH	FBAS-Signal-Cinch Buchse / CCVS signal-cinch socket / FBAS-prise à cinch / FBAS-presa cinch / FBAS-cinch	IM CLOCK	I ² C Bus -Clock
FBAS MAC	FBAS-D2 MAC / D2MAC CCVS signal / Signal vidéo composite-D2MAC / FBAS-D2MAC / FBAS-D2MAC	IM IDENT	I ² C Bus -Kennung / I ² C-Bus Identification / Identification I ² C-Bus / Ident. I ² C-Bus, Identification I ² C-Bus
FBAS TON	Basisband / Baseband / Bande de base / Banda base / Banda base	IM RESET	I ² C Bus -Reset
FBAS TXT	FBAS-Videotext / CCVS videotext / Signal vidéo composite-Télétex / FBAS-Teletext / FBAS-Teletext	IR CLK	Infrarot Clock / Infrared clock / Signal I.R. horloge / Clock segnale R.I. / Clock infrarojos
FBAS TEXT		IR DATA	Infrarot Signal / Infrared signal / Signal I.R. / Segnale infrarosso / Data infrarojos
FBAS SYNC.	FBAS Sync. Signal / CCVS sync signal / Signal sync. vidéo col. comp. / Signal sincr. video col. comp. / Señal sincr. video compuesta	IR VIDEO	Infrarot Signal Video / Infrared signal video / Signal I.R. video / Segnale infrarosso video / Data infrarojos video
FBAS S-VHS	FBAS Signal S-VHS / CCVS signal S-VHS / Signal vidéo col. comp. S-VHS / Signal video col. comp. S-VHS / Señal video compuesta S-VHS	KB	Keyboard
F H ⚡	Hochspg. / EHT voltage / Haute tens. / Alta tens. / MAT	KH AUDIO-L	Tonsignal Kopfhörer links / Audio signal headphone left / Signal audio gauche de casque / Segnale audio sinistra cuffia / Señal audio izquierda auriculares
FRM	Rahmensignal / Frame signal / Signal d'encadrement / Segnale cornice / Señal de marco	KH AUDIO-R	Tonsignal Kopfhörer rechts / Audio signal headphone right / Signal audio droit de casque / Segnale audio sinistra cuffia / Señal audio derecha auriculares
FT	Feinabstimmung / Fine tuning / Reglage fin / Sint. fine / Sint. fina	L	Lautstärke / Volume / Volume / Volume sonore / Volumen
F U	FU-Signal / FU-signal / Signal FU / Segnale FU / Senal FU	LED	Leuchtdiode / Light emitting diode / Diode lumineuse / Diodo luminoso / Diodo luminescente
F V	FV-Signal / FV-signal / Signal FV / Segnale FV / Senal FV	M	Speicher Taste / Memory button / Touche mémoire / Tasto di memoria / Puls. memoria
G	Grün-Signal / Green signal / Signal green external / Signal vert / Segnale verde / Señal verde	MEGA LOGIC	Megalogic Daten / Megalogic data / Megalogic dates / Dati Megalogic / Megalogic datas
G OSD	OSD-Einblendung grün / OSD green / Eblouissement OSD vert / Visualizzazione OSD verde / Visualisacione OSD verde	MODE	Modus / Mode / Mode / Modo / Modo
G PIP	Grün-Signal PIP / Green signal PIP / Signal green PIP / Signal vert PIP / Segnale verde PIP / Señal verde PIP	NIC CLK	NICAM Clock / Clock NICAM / Horloge NICAM / Clock NICAM / Clock NICAM
G EXT	Grün-Signal extern / Green signal vertical / Signal vert externe / Segnale verde esterno / Señal verde externa	NORM	Norm Taste / TV standard select button / touche de norme / Tasto norma / Puls. de norma
G/50	Grün-Signal - 50Hz vert., 15625Hz hor. / Green signal - 50Hz vert., 15625Hz hor. / Signal vert - 50Hz vert., 15625Hz hor. / Segnale verde - 50Hz vert., 15625Hz hor. / Señal verde - 50Hz vert., 15625Hz hor.	OWA	Ost-West Ansteuerimpuls / East-west drive impuls / Impulsion de commande Est-Ouest / Impulso comando Est-Ovest / Impulso de control Este-Oeste
G/100	Grün-Signal - 100Hz vert., 31250Hz hor. / Green signal - 100Hz vert., 31250Hz hor. / Signal vert - 100Hz vert., 31250Hz hor. / Segnale verde - 100Hz vert., 31250Hz hor. / Señal verde - 100Hz vert., 31250Hz hor.	P	Programm / Program / Programme / Programma / Programa
GND - H	Nullpunkt Heizung / Ground filament / Point neutre-Chauffage / Punto zero-Filamento / Punto medio filamento	P/C	Programm-Kanalwahl / Program channel selection / Progr. sélection de canaux / Progr. selez.canale / Progr. selec. canal
HA	Horiz. Sync. Impuls / Horiz. Sync pulse / Impulsion synchro. horiz. / Impulso sincro orizzontale / Impulso de sinc. horiz.	PIP	Bild im Bild / Picture in picture / Image dans l'image / PIP / Imagen en la imagen
HDR	Horiz. Ansteuerimpuls / Horiz. drive pulse / Impulsion de commande horiz. / Impulso comando orizzontale / Impulso de control horiz.	P1	Progr. Taste / Progr. button / Touche Progr. / Tasto Progr. / Puls. Progr.
HC	Horiz. Klemmimpuls / Horiz. clamp pulse / Impulsion de serrage horiz. / Impulso comando orizzontale / Impulso de garras horiz.	R	Rot-Signal / Red signal / Signal rouge / Segnale rosso / Señal rojo
H SYNC	Horizontaler Sync-Impuls / Horizontal Sync impuls / Sync impuls horizontale / Sinc impulso orizontale / Impulso sync horizontal	REMOTE	Fernbedienung / Remote control / Telecommande / Telecomando / Mando a distancia
HFB	Horiz. Rückschlagimpuls / Horiz. flyback / Impulsion de retour horiz. / Impulso ritorno orizzontale / Impulso de retroceso horiz.	R OSD	OSD-Einblendung rot / OSD red / Eblouissement OSD rouge / Visualizzazione OSD rosso / Visualisacione OSD rojo
HS	Hor. Sync. Impuls für VT / Hor. sync pulse for TT / Imp. de sync. hor. pour TXT / Imp. sincr. orizz. per Teletext / Imp. hor. para Video Comp.	R PIP	Rot-Signal PIP / Red signal PIP / Signal rouge PIP / Segnale rosso PIP / Señal rojo PIP
I2S CL	Digitale Datensignale / Digital data signals / Signal donnéé digital / Segnali dati digitali / Señal datos digital	R EXT	Rot-Signal extern / Signal red external / Signal rouge externe / Segnale rosso esterno / Señal rojo externa
I2S TER		R-Y / 50	R-Y -Signal - 50Hz vert., 15625Hz hor. / R-Y -Signal - 50Hz vert., 15625Hz hor. / Signal R-Y - 50Hz vert., 15625Hz hor. / Segnale R-Y - 50Hz vert., 15625Hz hor. / Señal R-Y - 50Hz vert., 15625Hz hor.
I2S IN		R-Y / 100	R-Y -Signal - 100Hz vert., 31250Hz hor. / R-Y -Signal - 100Hz vert., 31250Hz hor. / Signal R-Y - 100Hz vert., 31250Hz hor. / Segnale R-Y - 100Hz vert., 31250Hz hor. / Señal R-Y - 100Hz vert., 31250Hz hor.
I2S WS		S	Sonderkanal / Special channel / Canal special / Canale speciale / Canal especial
I BEAM	Strahlstrom / Current beam / Current rayon / Corrente del irradiare / Corriente de haz		
ICL	I ² C Bus -Clock		

SB	Strahlstrombegrenzung / Beam current lim. / Lim. cour. de faisceau / Lim. corr. di raggio / Corriente media de haz	VIDEO	Video Signal / Video signal / Signal vidéo / Segnale video / Señal video
SCL	I ² C-Bus Clock	VT DATA	Videotext Daten / Teletext data / Données Teletexte / Linea dati Televideo / Data Teletexto
SCL 100	Schneller I ² C-Bus Clock / I ² C-Bus clock high speed / I ² C-Bus grande vitesse / I ² C-Bus veloce / Clock del I ² C-Bus de alta velocidad	VT SCL	Videotext Clock / Teletext clock / Signal horloge Vidéotext / Clock Televideo / Clock Teletexto
SDA	I ² C-Bus Daten / I ² C-Bus data / I ² C-Bus données / I ² C-Bus dati / I ² C-Bus datos	VT SDA	I ² C Bus: VT Daten / Teletext data / Données Vidéotext / Dati Televideo / Data Teletexto
SHIFT VIDEO	Dynamische vert. Versch. 25Hz, aktiv bei Video u. Mix Betrieb / Dynam. vert. shift 25Hz, active on video and mix operation / Decal dynam. de l'image 25Hz, actif sur video et fonction. mixte / Spostam. vert. dinam. 25Hz, attivo con video e. funzionam. misto / Desplaz. dinamico vert. 25Hz, activo con video Y funciones mixtas	V SYNC	Vertikaler Sync-Impuls / Vertical Sync impuls / Sync impuls vertical / Sinc impulso vertical / Impulso sync vertical
SHIFT TEXT	Dynamische vert. Versch. 25Hz, aktiv bei Standbild u. VT / Dyn. vert. shift 25Hz, active on freeze-frame and Teletext / Decal dynam. de l'image 25Hz, actif sur arret image et Vidéotext (Antiope) / Spostam. vert. dinam. 25Hz, attivo con fermo immag. e Televideo / Desplaz. dinamico vert. 25Hz, activo con imagen parada Y Videotexto	Y	Y-Signal / Y Signal / Signal Y / Segnale Y / Señal Y
SS	Schutzschaltung / Protection circuit / Cablage protecteur / Pot. de prot. / Circuito de proteccion	Y / 50	Y-Signal - 50Hz vert., 15625Hz hor. / Y-Signal - 50Hz vert., 15625Hz hor. / Signal Y - 50Hz vert., 15625Hz hor. / Segnale Y - 50Hz vert., 15625Hz hor. / Señal Y - 50Hz vert., 15625Hz hor.
SSB	Spitzenstrahlstrombegrenzung / Peak beam current limiting / Lim. de faisceau crete / Lim. corr. catod. di pico / Corrente pico de haz	Y / 100	Y - Signal - 100Hz vert., 31250Hz hor. / Y -Signal - 100Hz vert., 31250Hz hor. / Signal Y - 100Hz vert., 31250Hz hor. / Segnale Y - 100Hz vert., 31250Hz hor. / Señal Y - 100Hz vert., 31250Hz hor.
SSC	Supersandcastle	ZF	Zwischenfrequenz / IF / FI / FI / FI
SSC PIP	Supersandcastle PIP	U AFC	Schaltspg. AFC / AFC switching volt. / Tens. de commut. AFC / Tens. di commut. AFC / Tens. conmut. CAF
SSC / 100	Supersandcastle 100Hz vert., 31250Hz hor.	U AV	Schaltspg. AV / Switching volt. AV / Tens. de commut. AV / Tens. di commut. AV / Tens. conmut. AV
SSC / 50	Supersandcastle 50Hz vert., 15625Hz hor.	U B1	Schaltspg. Band 1 / Switching volt. band 1 / Tens. de commut. bande 1 / Tens. di commut. banda 1 / Tens. conmut. de banda 1
SUR-ROUND	Surround	U B2	Schaltspg. Band 3 / Switching volt. band 3 / Tens. de commut. bande 3 / Tens. di commut. banda 3 / Tens. conmut. de banda 3
SYNC	Sync.-Signal / Sync.-Signal / Signal sync / Segnale sync. / Señal de sync.	U BA	Schaltspg. Bildamplitude / Switching voltage vertical amplitude / Tension de coupure amplitude d'image / Tensione di commutaz. ampiezza d'immagine / Tension de comm. amplitude de imagen di commut. PAL / Tens. conmut. PAL
SYNC. BTX	Sync. BTX / Viewdata Sync / Sync. Télétext / Sincr. Videotel / Sincr. Videotexto	U BTX	Schaltspg. BTX / Switching volt. BTX (Viewdata) / Tens. conmut. Télétext / Tens. conmut. VIDEOTEL / Tens. conmut. Teletexto
SYNC. VT	Sync. VT / Sync. Teletext / Sync Vidéotexte / Sincr. Televideo / Sincr. Videotexto	U C-AV	Schaltspg. Camera Wiederg. über Camera-AV Eingang / Switching volt. cam. playback via Camera-AV input / Tens de commut pour lec. de camera par l'entree Camera-AV / Tens.de commut. in riproduz. camera tramite ingresso Camera-AV / Tens. de serv. reprod. camera a traves de la entrada Camera-AV
SW	Schwarzwert / Black level / Niveau du noir / Livello del nero / Nivel de negro	U DATA	Schaltspg. Datenbetr. / Switching volt. data mode / Tens. de commut. fonct. données / Tens. di commut. dati / Tens conmut. datos
TE	TEXT-Freigabe / TEXT enable / Autorisation TEXTE / Abilitaz. TELEVIDEO / Habilitation TEXTE	U DATA EXT	Schaltspg. U Data extern / Switching volt Data ext. / Tension de commutation U Data externe / Tens. di commutazione U-Data esterno / Tensión de conmutación externa U
T1	Bei Zweitön, Ton 1 / On two channel sound, sound 1 / Pour double son, son 1 / In bicanale, audio 1 / En dual, sonido 1	U DATA OSD	Schaltspg. für Bildschirm-Einblendung / Switching volt. for On Screen Display / Tens. conmut. pour eblouissement On Screen Display / Tens. conmut. per di visualizzazione On Screen Display / Tens. conmut. para On Screen Display
T2	Bei Zweitön, Ton 2 / On two channel sound, sound 2 / Pour double son, son 2 / In bicanale, audio 2 / En dual, sonido 2	U DEEM	Schaltspg. Deemphasis / Switching volt. deemphasis / Tens. conmut. desaccent. / Tens. conmut. deenfasi / Tens. conmut. deenfasis
TT	Tieftöner / Woofer / Haut-parleur pour les frequences basses / Toni bassi / Sonido bajo	U DS	Schaltspg. Dolby-Surround / Switching volt. Dolby-Surround / Tens. conmut. Dolby-Surround / Tens. conmut. di Dolby-Surround / Tens. de conmut. Dolby-Surround
U FOC	Fokusspg. / Focussing volt. / Tens. de focalis. / Tens di focalizz. / Tens focalizacion	U EURO-AV	Schaltspg. EURO-AV / Switching volt. EURO-AV / Tens. de commut. EURO-AV / Tens. di commut. EURO-AV / Tens. conmut. EURO-AV
U G1	Spg. Gitter G 1 / Volt. grid G1 / Tens grille G 1 / Tens. griglia G1 / Tens. rejillas G 1	U EU-AV CINCH	Schaltspg. EURO-AV-Cinch-Buchse / Switching volt. EURO-AV-Cinch socket / Tens. conmut. prise Scart - Cinch / Tens. conmut. presa Scart - Cinch / Tens. conmut. EURO-AV - Cinch
U H	Hochspannung / High voltage / Haute tension / EAT / Alte tension	U FBAS	Schaltspannung für Video-Ausgang EURO-AV Buchse / Switch. voltage for video output EURO-AV socket / Tension de commut. pour sortie vidéo EURO-AV / Tension conmut. per presa d'uscita video EURO-AV / Tension de conmut. para salida EURO-AV
U G2	Schirmgitter Spg. / Screen-grid volt. / Tens. de grille - écran / Tens. di griglia schermo / Tens. de rejilla	U HIFI	Schaltspg. HIFI / Switching voltage HIFI / Tens. de commut. HIFI / Tens di commut. HIFI / Tens. conmut. HIFI
VA	Vertikaler Ansteuerimpuls / Vert. drive pulse / Impulsion de commande verticale / Impulso di comando verticale / Impulso de control vertical	U HIFI MUTE	Stummschaltung HiFi / Muting volt. HiFi / Commutation de silence HiFi / Silenzametno HiFi / Muting HiFi
VB		U HUB	Schaltspg. HUB / Switching volt. deviation / Tens. conmut. déviation / Tens. conmut. deviazione / Tens. conmut. deviacion
VCL	VCR - Clock		
VDR	Freigabe Anzeigebaustein / Display enable / Autorisation pour module indicateur / Modulo indicazione / Habilitacion modulo indicacion		
VG	Vert. Gegenkopplung / Vert. feedback / Contre-reaction verticale / Controreazione vert. / Aliment. neg. vert.		

	Schaltspg. Signalkennung AV 3 / Switching volt. signal identification AV 3 / Tens. de commut. identification de signal AV3 / Tens. commut. identificazione segnale / Tens. commut. identifi. señal AV3		Schaltspg. Wischerkontakt / Switching voltage temp. contact / Tens. de commut. contact fugitif / Tens. commut. contatto temporaneo / Contacto supresor tens. de commut.
	Stummschaltung Kopfhörer / Muting volt. headphone / Commutation de silence casque / Silenzamento cuffia / Muting auriculares		Schaltspg. ZF breit - schmal / IF switching volt. wide - narrow / Tens. commut. FI large - etroit / Tens. commut. FI larga - stretta / Tens. FI ancho - estrecho
	Gleichspannung für SAT-Basisignal / DC for SAT basic signal / Tens. continue pour SAT base signal / Tens. continua per segnale SAT base / Tens. continua para señal SAT base		Schaltspg. Bandwahl / Band sel. switching volt. / Tens. de commut. select. bande / Tens. di commut. selez. banda / Tens. commut. selec. banda
	Schaltspg. Koinz. / Switching volt. coinc. / Tens. de commut. coinc. / Tens. di commut. coinc. / Tens. commut. coinc.		14V Schaltspg. / 14V switching volt. / Tens. commut. 14V / Tens. commut. 14V / Tens. de comm. 14V
	Schaltspg. Koinz. mit Videoquelle verknüpft / Coinc. switching volt. linked with video source / Signal de coincid. combiné avec source video / Tens. di commut. a coinc. combinata con sorg video señal de coincidencia combinada con video		22kHz Schaltspg. / 22kHz switching volt. / Tens. commut. 22kHz / Tens. commut. 22kHz / Tens. de comm. 22kHz
	Schaltspg. LED / Switching volt. LED / Tens. de commut. LED / Tens. commut. LED / Commut. LED		0/3/6/9V Schaltspg. / 0/3/6/9V switching volt. / Tens. commut. 0/3/6/9V / Tens. commut. 0/3/6/9V / Tens. de comm. 0/3/6/9V
	Schaltspg. Leuchtpunktunterdrückung / Switching volt. beam spot suppression / Tens. de commut. suppress. du spot lumineux / Tens. soppr. punto luminoso / Tens. de commut. filtro supresor del punto luz		Schaltspg. 4,5MHz / Switching volt. 4,5MHz / Tens. de commut. 4,5MHz / Tens. di commut. 4,5MHz / Tens. commut. 4,5MHz
	Schaltspg. LNC "Aus" / Switching volt. LNC "OFF" / Tens. de commut. LNC "OFF" / Tensione di commut. "Spento" LNC / Tension LNC "OFF"		Schaltspg. 50-60Hz / Switching volt. 50-60Hz / tens. de commut. 50-60Hz / Tens. di commut. 50-60Hz / Tens. commut. 50-60Hz
	Schaltspg. D2MAC / Switching volt. D2MAC / Tension de commutation D2MAC / Tens. di commutazione D2MAC / Tensión de conmutación D2MAC		Regelspg. AFC / AFC contr. volt. / Tens. de regul. AFC / Tens. di contr. AFC / Tens. regul. CAF
	Stummschaltung / Muting / Silencieux / Silenziamento / Muting		Regelspg. AFC Satellitentuner / AFC contr. volt. SAT tuner / Tens. de regul. AFC tuner SAT / Tens. di contr. AFC Tuner SAT / Tens. regul. CAF Tuner SAT
	Schaltspg. NF 1 / Switching volt. AF 1 / Tension commut. BF 1 / Tens. commut BF 1 / Tens. comm. BF 1		Feldstärkeabhängige Spg. / Fieldstrength-dep. volt. / Contr. automatique de gain / Tens. dip. intens. campo / Contr. autom. de gain tens. CAG
	Schaltspg. NF 2 / Switching volt. AF 2 / Tension commut. BF 2 / Tens. commut BF 2 / Tens. comm. BF 2		Regelspg. / Contr. volt. / Tens. de regul. / Tens. di contr. / Tens. regul.
	Schaltspg. NICAM / Switching volt. NICAM / Tens. de commut. NICAM / Tens. commut. NICAM / Tens. de commut. NICAM		Abstimmungspg. Tuner / Tuning volt. tuner / Tens. d'accord tuner / Tens. di sintonia tuner / Tens. sintonia tuner
	Schaltspg. Norm / Switching volt. Norm / Tens. de commut. standard / Tens. di commut. Norma / Tens. commut. Norma		Regelspg. Verzög. / Delayed contr. volt. / Tens. de regul. retardée / Tens. regul. retardada
	Schaltspg. PAL / Switching volt. PAL / Tens. de commut. PAL / Tens. di commut. PAL / Tens. commut. PAL		Horizontale Ansteuerung / Horiz. drive / Synchr. lignes / Pilotaggio orizz. / Exitación horiz.
	Schaltspg. Polarität / Switching volt. polarity / Tension commut. polarite / Tens. commut. polarita / Tens. commut. polarizacion		31250Hz Ansteuerimp. für Zeilenendstufe / 31250Hz Triggering pulse for horiz. output / 31250Hz commande pour l'étage final lignes / Imp. Pilotaggio di 31250Hz per stadio finale di riga / Impulso de excitación 31250Hz para paso final de líneas
	Schaltspg. Ökoschalter / Switching volt. eco switch / Tens. de commut. interr. eco. / Tens. commut. interr. ecologico / Tens. commut. interr. ecol.		Vert. Parabel / Vert. parabolic signal / Signal parabolique vert. / Segnale parab. vert. / Señal parabolica vert.
	Schaltspg. Panorama View / Switching volt. Panorama View / Tens. de commut. Panorama View / Tens. commut. Panorama View / Tens. commut. Panorama View		Vert. Tastimpuls / Vert. Gating pulse / Imp. trame / Imp. a cadenza vert. / Imp. cuadro
	Schaltspg. Reset / Switching volt. Reset / Tens. commut. Reset / Tens. commut. Reset / Tens. commut. Reset		Vert. Tastimpuls 100Hz / Vert. Gating pulse 100Hz / Imp. trame 100Hz / Imp. a cadenza vert. 100Hz / Imp. cuadro 100Hz
	Schaltspg. RGB1 - RGB2 / Switching volt. RGB1 - RGB2 / Tens. de commut. RGB1 - RGB2 / Tens. di commut. RGB1 - RGB2 / Tens. commut. RGB1 - RGB2		Vert. Sägezahn / Vert. saw tooth / Signal dent de scie / Dente di sega vert. / Dientede sierra vert.
	Schaltspg.-Schutzfunktion / Switching volt.-protective func. / Tens. de commut.-sécurité / Tens. di commut.-funz di protez. / Tens. commut.-proteccion		Vert. Sägezahn 100Hz / Vert. saw tooth 100Hz / Signal dent de scie 100Hz / Dente di sega vert. 100Hz / Dientede sierra vert. 100Hz
	Schaltspg. SECAM / Switching volt. SECAM / Tens. de commut. SECAM / Tens. di commut. SECAM / Tens. comm. SECAM		Vert. Parabel 100Hz / Vert. parabolic 100Hz signal / Signal parabolique 100Hz vert. / Segnale parab. vert. 100Hz / Señal parabolica vert. 100Hz
	Schaltspg. Standby / Switching volt. Standby / Tens. commut. Veille / Tens. commut. Standby / Tens. commut. Standby		Tastimpuls / Gating pulse / Impuls de declenchement / Impulso a cadenza / Imp. puerta
	Schaltspg. S-VHS / Switching volt. S-VHS / Tens. de commut. S-VHS / Tens. de commut. S-VHS / Tens. de commut. S-VHS		Ref. Impuls hor. / Reference impulse hor. / Imp. de refer. hor. / Imp. di rifer. hor. / Imp. refer. horiz.
	Schaltspg. Ton 1-2 / Switching volt. sound 1-2 / Tens. commut. audio 1-2 / Tens. commut. son 1-2 / Tens. commut. son 1-2		Klemmung Ein-Aus / Clamping On-Off / Clampage Marche-Arrêt / Clamping Ins.-Disins. / Clamping Enc.-Apag.
	Schaltspg. UHF / UHF switching volt. / Tens. de commut. UHF / Tens. di commut. UHF / Tens. commut. UHF		Pulse für Polarotor / Pulses for Polar-Rotor / Impulsions Rotor de Polarisation / Impulsi per Rotore Polarizzazione / Impulsos para Polarrotor
	Schaltspg. VHF / VHF switching volt. / Tens. de commut. VHF / Tens. di commut. VHF / Tens. commut. VHF		O-W Amplitude / E-W amplitude / Amplitude E-O / Ampiezza E-O / Amplitud E-O
	Schaltspg. Videoquelle / Switching volt. video source / Tens. de commut. source video / Tens. di commut. sorg. video / Tens. commut. video		

Operating Hints

This chapter contains excerpts from the operating instructions. For further particulars please refer to the appropriate user instructions the part number of which is indicated in the relevant spare parts list.

4

WELCOME ...

... to digital terrestrial television

Welcome to a new form of entertainment with new free to air – and subscription services.
Future features are interactive via the modem and Common Interface, and are used for home shopping, home banking and other services.

What is digital TV and why is the world changing to digital transmission?

Digital transmission will do for the eyes what the Compact Disc brought for the ears!
No noise in the picture, no cross effects between the picture and sound content, no influence of multipath reception as a result of reflections to the aerial. The quality of reception is outstanding.
Digital terrestrial television is received through the same aerial that is used for existing analogue TV reception and is transmitted preferably in the widescreen format 16:9 (speak 16 by nine).
Please note, a few TV transmitter stations will have to transmit some of the digital services on new frequencies outside of the existing frequency range.
This would make it necessary to have a broadband aerial installed in order to receive all the new services.

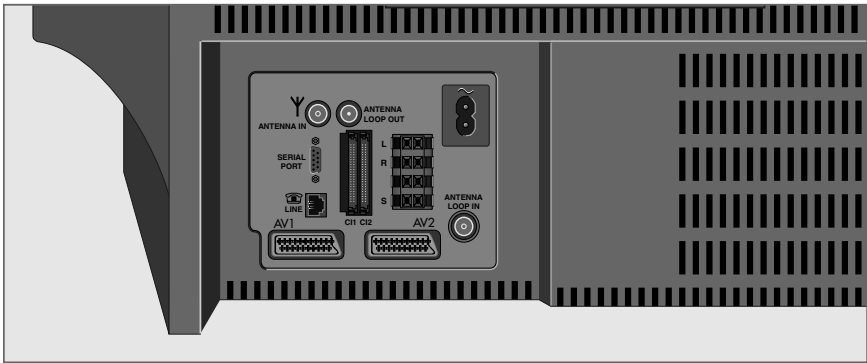
How can I record digital transmissions?

Don't worry, this is possible via the Scart extension from your Grundig TV. Refer to page 14.
More good news: Digital terrestrial TV was introduced in november '98, but new features for interactivities may change the existing TV's software. Don't worry! Your TV is prepared for updating any kind of change via the Common Interface (PCMCIA) slot on the rear of the TV. Refer to page 10.
Flashcards to do this are available, if needed, via your dealer or our Service Organisation.
If you want to judge the picture quality, just follow the instructions on page 62.
Your GRUNDIG IDTV (Integrated Digital TV) displays an integrated colour bar test pattern in digital mode – in digital resolution.
Impressive this new TV generation – isn't it. Grundig made for you.

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AT A GLANCE

The rear of the TV set



Y ANTENNA IN	Input for house aerial.
ANTENNA LOOP OUT	Aerial output (to »ANTENNA LOOP IN« socket or to external equipment).
~	Mains cable to mains socket.
SERIAL PORT	Service connector for specialized dealer.
LINE	Modem connection socket.
CI1 CI2	Common Interface slots for expansion modules. These modules must be 3,3 V or 5 V compatible.
L R	Clamping terminals for front loudspeakers.
S	Clamping terminals for surround loudspeakers.
ANTENNA LOOP IN	Aerial input.
AV 1	Euro/AV socket (Mecallogic, CSCC, S-VHS).
AV 2	Euro/AV socket (CSCC, S-VHS).

AT A GLANCE

The remote control



- Switches the TV set to stand-by.
- 1...9**
0 AV Switch the TV set on from stand-by; select channel and AV programme positions directly; enter the teletext page numbers.
- Switch the TV set on from stand-by (only »«); select channels step by step; move cursor up/down.
- Change volume setting; move cursor to the left/to the right.
- OK** Changes and activates different functions; switches between the two TV channels last viewed; switches to optimum settings (»**AUX**« and »**OK**«).
- i** Calls up the digital and the analogue Dialogue Centre (»**i**« and »**OK**«).
- EPG** Calls up the "electronic TV Programme Guide" in digital mode.
- TXT** Switches between teletext and TV mode in analogue mode and MHEG application in digital mode.
- Sound on/off (mute)
- Calls up the »Picture settings« menu.
- Clock time on/off.
- D/A** Switches between analogue and digital TV channels (services).
- Calls up the »Sound settings« menu.

ENGLISH

11

AT A GLANCE

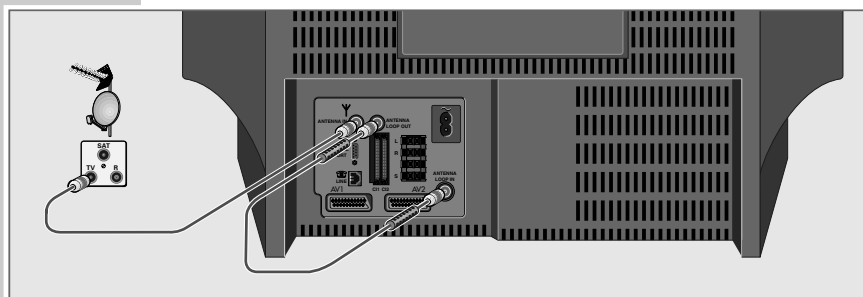


- Adjust colour intensity.
- Adjust brightness.
- i-activ** Switches the remote control buttons between MHEG operation and TV operation.
- CL** Ends a running Timer recording.
- Switches the picture format.
- AUX** Preselection button for various functions; calls up the »**AUX**« menu.
- SAT** Switches to remote control of a GRUNDIG satellite receiver. See page 63 for a description of the possible functions.
- VIDEO** Switches to remote control of a GRUNDIG video recorder. See page 63 for a description of the possible functions.

CONNECTION AND PREPARATION

Connecting the aerial, a video recorder, a satellite receiver

Connecting the aerial to the TV set



- 1 Connect the cable from the house aerial with the »Y ANTENNA IN« socket on the TV set.
- 2 Connect the aerial cable supplied with the »ANTENNA LOOP OUT« socket and the »ANTENNA LOOP IN« socket on the TV set.

Note:

When receiving stations in band 1 (45 MHz - 62 MHz) or in band 3 (175 MHz - 225 MHz), it is necessary to connect a frequency filter in front of the aerial input »Y ANTENNA IN« (Ask your GRUNDIG Dealer).

ENGLISH

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SETTINGS

Channel programming

The TV set is equipped with an automatic tuning system for analogue and digital TV channels. The tuning can take approx. 15 minutes.

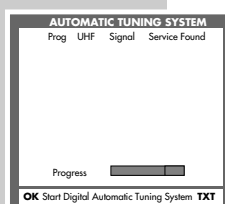
When the set is first powered up and you start the automatic tuning system the TV set searches at first for digital TV channels and then for analogue TV channels.

99 channel positions for digital TV channels (services) and 99 channel positions for analogue TV channels are available.

When the automatic search is completed, you may sort the channels in a sequence of your choice for digital and then for analogue channels. Mixing is not possible.

You may delete TV channels which have been found several times, or those with poor reception quality, from the TV programme charts.

Programming digital and analogue TV channels using the automatic tuning system



- 1 Switch the TV set on by pressing »IO« on the TV set.
– The »AUTOMATIC TUNING SYSTEM« screen appears.
- 2 Start the search with »OK«.
– The TV set searches at first for digital TV channels and then for analogue TV channels. Depending on the number of channels which can be received, the search can take some time.
– When the search is completed, the TV set switches to channel position 1 and the »DIGITAL PROGRAM SORT« screen appears.

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SETTINGS

Note:

The search can be aborted at any time by pressing »TXT«.

If the search system has found no digital TV services, the message »No Digital Services Found« appears.

Delete digital TV channel positions

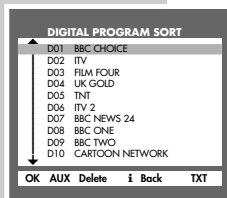
- 1 In the »DIGITAL PROGRAM SORT« table, select the channel to be cleared with »▲« or »▼«.

- 2 Delete the channel with »AUX«.

Notes:

To clear further channel positions, repeat the steps 1 and 2.

If the channel position is locked (see chapter „Parental Lock“ on page 44), it cannot be deleted.



Sorting digital TV channels

- 1 In the »DIGITAL PROGRAM SORT« table, select the channel position of the channel to be moved to another position with »▲« or »▼«.

- 2 Mark the channel with »OK«.

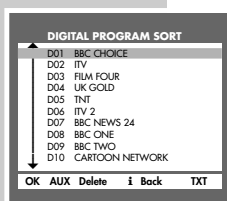
- 3 Select the channel position to which the marked channel is to be moved with »▲« or »▼«.

- 4 Store the setting with »OK«.

Note:

To sort further channels, repeat the steps 1 to 4.

- 5 Continue the setting for analogue TV channels by pressing »TXT«.



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SETTINGS

Delete analogue TV channel positions

- 1 In the »SORT« table, select the channel to be cleared with »▲« or »▼«.

- 2 Delete the channel with »AUX«.

Note:

To clear further channel positions, repeat the steps 1 and 2.

Sorting analogue TV channels

- 1 In the »SORT« table, select the channel position of the channel to be moved to another position with »▲« or »▼«.

- 2 Mark the channel with »OK«.

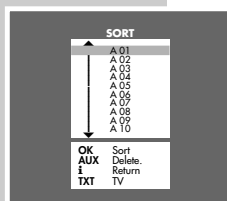
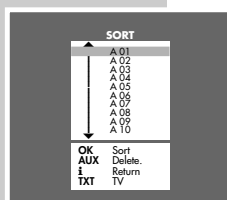
- 3 Select the channel position to which the marked channel is to be moved with »▲« or »▼«.

- 4 Store the setting with »OK«.

Note:

To sort further channels, repeat the steps 1 to 4.

- 5 End the setting with »TXT«.



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SETTINGS

DIGITAL DIALOGUE CENTRE

SLEEP TIMER

RECORD TIMER

PARENTAL LOCK

PARENTAL CHANNEL LOCK

SPECIAL FUNCTIONS

PROGRAM SORT

MANUAL TUNING

AUTOMATIC TUNING SYSTEM

CONFIGURATION

COMMON INTERFACE

OK

Analogue

TXT

ANALOGUE DIALOGUE CENTRE

SLEEP TIMER

PARENTAL LOCK

SPECIAL FUNCTIONS

PROGRAM SORT

ANALOGUE MANUAL TUNING

ANALOGUE AUTOMATIC TUNING

SERVICE

OK

Digital

TXT

Programming new digital TV channels using the automatic tuning system

The TV set searches for new digital TV services. These are added to the already existing services in the »DIGITAL PROGRAM SORT« table. This can take approx. 15 minutes.

- In digital mode, call up the »DIGITAL DIALOGUE CENTRE« by pressing »i« and then »OK«.
- Select the »AUTOMATIC TUNING SYSTEM« row with »▲« or »▼« then confirm with »OK«.
- Start the search with »OK«.
 - The end of searching is indicated by the menu »DIGITAL PROGRAM SORT«.See page 20 for information about sorting and clearing digital services.

Programming new analogue TV channels using the automatic tuning system

The TV set searches for new analogue TV channels. These are inserted in the »SORT« table in the place of the existing channels.

- In analogue mode, call up the »ANALOGUE DIALOGUE CENTRE« by pressing »i« and then »OK«.
- Select the »AUTOMATIC TUNING SYSTEM« row with »▲« or »▼« then confirm with »OK«.
- Start the search with »OK«.
 - The end of searching is indicated by the menu »SORT«.See page 21 for information about sorting and clearing analogue TV channels.

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SETTINGS

The Dialogue Centre

In the Dialogue Centre you can make a variety of settings, call up information, and get specific help for operating your television.

For this TV set, two Dialogue Centres are available:

- the analogue Dialogue Centre for operation with analogue TV programmes,
- the digital Dialogue Centre for operation with digital TV programmes.

The line »COMMON INTERFACE« is greyed out. Please see page 54 for information on possible future upgrades.

Functions which are the same for analogue and digital reception are to be found under the same function names.

The Digital Dialogue Centre comprises additional functions which are possible when receiving digital TV channels (services).

ANALOGUE DIALOGUE CENTRE

SLEEP TIMER

PARENTAL LOCK

SPECIAL FUNCTIONS

PROGRAM SORT

ANALOGUE MANUAL TUNING

ANALOGUE AUTOMATIC TUNING

SERVICE

OK

Digital

TXT

DIGITAL DIALOGUE CENTRE

SLEEP TIMER

RECORD TIMER

PARENTAL LOCK

PARENTAL CHANNEL LOCK

SPECIAL FUNCTIONS

PROGRAM SORT

MANUAL TUNING

AUTOMATIC TUNING SYSTEM

CONFIGURATION

COMMON INTERFACE

OK

Analogue

TXT

Symbol

Button

Function

i

ⓘ

Calls up the »DIALOGUE CENTRE« (»i« then »OK«) and switches back to the »Dialogue Centre« when you are on an individual page.

▲

▲ ▼

Call up rows or functions on a page step by step.

◀ ▶

⌂ ⌂

Change settings.

OK

OK

Confirms functions.

TXT

TXT

Ends settings.

1

Call up the Dialogue Centre with »i« and then »OK«.

- Which Dialogue Centre appears, depends on which TV programme (analogue or digital) has been selected.
- Button symbols and dialogue lines display possible operating steps.
- The characters on the screen are symbols for the following buttons on the remote control:

2

Switch between the »ANALOGUE DIALOGUE CENTRE« and the »DIGITAL DIALOGUE CENTRE« by pressing »D/A«.

3

Exit the »DIALOGUE CENTRE« by pressing »TXT«.

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1 - 14

GRUNDIG Service

SETTINGS

Picture settings

Adjusting the contrast and sharpness

- 1 Call up the »PICTURE« menu with »
– The »PICTURE« menu appears.
- 2 Select the desired function (»Contrast« or »Sharpness«) with »
»
»
»
».
- 3 Adjust the contrast or sharpness with »
»
».

Note:

The TV set has been tested using maximum contrast, in order to check for reliability of all modules. Depending on the location of the set and the brightness in the room (surrounding light) it does however make sense to reduce the contrast slightly for the best possible picture impression. The sharpness adjustment is not needed for digital services, i.e. the row »Sharpness« is not available in digital mode.

- 4 End the setting with »TXT«.

Adjusting the tint for NTSC broadcasts

Note:

The »Tint« row appears only with NTSC broadcasts.

- 1 Call up the »PICTURE« menu with »
– The »PICTURE« menu appears.
- 2 Select the »Tint« row with »
»
».
- 3 Adjust the tint with »
»
».
- 4 End the setting with »TXT«.

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SETTINGS

Sound settings

Stereo/two-channel sound, mono

If the TV set receives two-channel sound transmissions – e.g. a film in the original language on sound channel B (display: »DUAL B «) and the synchronized version on sound channel A (display: »DUAL A «) – then you may select the desired sound channel.

If the set receives stereo or NICAM transmissions, it automatically switches to stereo sound (display: »Stereo«). If stereo reception is poor, then the sound should be switched to »Mono«.

- 1 Call up the »SOUND« menu with »
».
- 2 Select the »A 01« (A = analogue TV channel) row with »
»
» then select the desired sound mode with »
»
».
- 3 If the sound for a particular channel is to be permanently in mono, select the »P..« row with »
»
» then press »OK«.

Note:

To cancel this setting, repeat step 3.

- 4 End the setting with »TXT«.

Adjusting the bass and treble

- 1 Call up the »SOUND« menu with »
».
- 2 Select the desired row (»
» – bass, or »
» – treble) with »
»
».
- 3 Adjust the bass or treble with »
»
».
- 4 End the setting with »TXT«.
– The setting is saved automatically.

ENGLISH

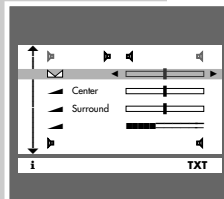
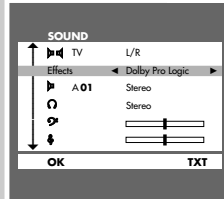
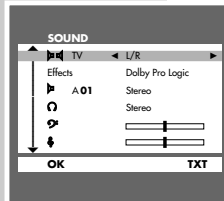
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SETTINGS

Sound settings for Dolby Pro Logic mode

With this setting you select:

- the Dolby effects;
- the loudspeaker configuration required;
- the loudspeaker volume levels;
- the overall volume.



- 1 Call up the »SOUND« menu with »F3«.
- 2 Select the »TV« row with »▲« or »▼« then use »◀« or »▶« to select the desired loudspeaker configuration.
– Configurations available:
»L/R« – The loudspeakers of the TV set are used as left/right loudspeakers.
»Center« – The loudspeakers of the TV set are used as centre loudspeaker.
»off« – The loudspeakers of the TV set are switched off. Instead, external front and/or centre loudspeakers are used.
- 3 Select the »Effects« row with »▲« or »▼« then use »◀« or »▶« to select the desired Dolby effect.
– Dolby effects available:
»off«, »Dolby Pro Logic«, »Dolby 3 Stereo«, »Pro Logic Phantom«, »Panorama«, »Pseudo Surround«.
– If the »Center« loudspeaker configuration has been selected in the »TV« row, only the Dolby effects »Dolby Pro Logic«, »Dolby 3 Stereo« or »Pseudo Surround« can be selected.
- 4 Select the »TV« row with »▲« or »▼« then press »OK«.
– The menu appears and you will hear a noise (test signal) from the loudspeakers.

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SETTINGS

- The test signal is emitted in the following order:
balance (right/left),
centre loudspeaker,
surround loudspeakers.
- The highlighted cursor bar and the red loudspeaker symbol indicate which loudspeaker is currently emitting the test signal.
- As long as the cursor bar is highlighted, it is possible to adjust the corresponding loudspeaker configuration for optimum sound in your living room.

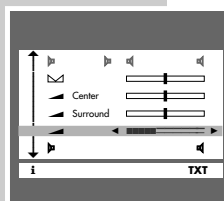
- 5 When »Balance« is highlighted, use »◀« or »▶« to adjust the front loudspeakers so that they emit with the same volume.
- 6 When »Center« is highlighted, use »◀« or »▶« to adjust the centre loudspeaker so that it emits with the same volume as the front loudspeakers.
- 7 When »Surround« is highlighted, use »◀« or »▶« to adjust the surround loudspeakers so that they emit with the same volume as the front loudspeakers.

Note:

As long as »◀« or »▶« is pressed in the steps 5 to 7, the cursor remains on the selected position.

The test signal is emitted only from the selected loudspeakers.

As soon as »◀« or »▶« is released, the cursor bar jumps to the next position in the test signal cycle.



- 8 Select the »TV« row with »▲« or »▼« then use »◀« or »▶« to select the desired volume for all loudspeakers.
- 9 End the setting with »TXT«.

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TV OPERATION

Functions for digital TV services

Information about the digital TV service

This information comprises the station name, the start and end time of the broadcast, and information about the broadcast, if available.

This information is displayed in the bottom part of the picture screen.



- 1 Press »i« to call up the information.
 - The information about the current broadcast on the channel selected is briefly displayed.
 - D 1 Channel 4 – Channel position with station name.
 - 17:12 – Current time.
 - NOW 16:55 – 17:30 – Current broadcast with start and end time.
 - Signal Quality 06 – Signal quality indication. If no suitable signal is present, the message »Bad Signal« will be displayed in place.

Note:

Pressing »i« will display more information about the current broadcast.

This information shows subtitles and the language if available.

See chapter „SPECIAL SETTINGS“ on page 62 for information about selecting subtitles and language.

If this channel is locked, this will be indicated as »P. Lock«.

- 2 To get information about the next broadcast on the same channel, press »< i«. To return to the information about the current broadcast, press »i>«.

- 3 To get information about further channels, press »< Δ« or »Δ>«.

Note:

Press »OK« if you wish to watch the programme on the channel about which information is currently displayed on the picture screen.

- 4 Press »i« once or twice to switch the information display off.

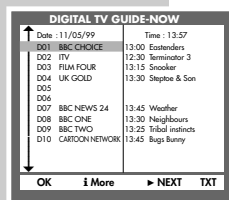
ENGLISH

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TV OPERATION

TV Guide for digital TV services

The TV Guide informs you about all broadcasts on all digital channels. This information comprises the channel position, the station name, the start and end time of the broadcast, and information about the broadcast, if available.



- 1 Press »EPG« to call up the information.
 - The »DIGITAL TV GUIDE – NOW« with information about the first 10 channel positions appears on the picture screen:

Date 11/05/99

Time: 13:57

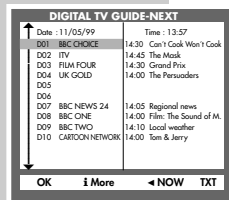
D01 BBC CHOICE

13:00 Eastenders

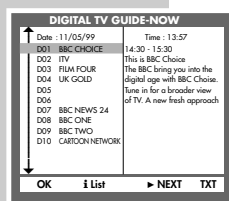
13:00 Eastenders

Note:

The channel positions 11 to 99 can be selected with »< Δ« or »Δ>«.



- 2 To get information about the next broadcast on the same channel, press »< i«. To return to the information about the current broadcast, press »i>«.



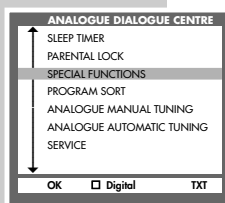
- 3 To get detailed information, use »< Δ« or »Δ>« to select the desired channel position then press »i«.
 - The information is displayed in the right-hand window. Press »i« again to switch the information off.

- 4 It is possible to select a channel directly in the »DIGITAL TV GUIDE« menu. To do this, select the channel position with »< Δ« or »Δ>« then press »OK«.
 - The menu is switched off and you will see the selected TV programme.

- 5 Press »TXT« to switch the »DIGITAL TV GUIDE« menu off.

CONVENIENCE FUNCTIONS

Convenience functions via the »SPECIAL FUNCTIONS« menu



- 1 Call up the »DIALOGUE CENTER« by pressing »i« and then »OK«.
- 2 Select the »SPECIAL FUNCTIONS« row from the »DIALOGUE CENTRE« with »△« or »▽« then confirm with »OK«.

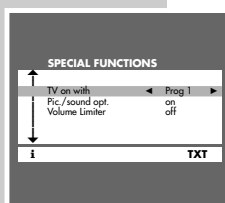
Note:

See the following chapters for further operation.

TV on with ...

If you frequently use the set as an AV monitor – e.g. together with a camera as a monitoring system or together with a satellite receiver – then this function can give priority to the programme position »AV«.

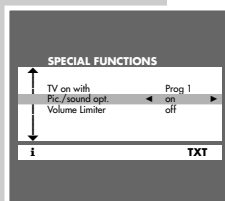
After switching on with the on/off switch, instead of programme position »P 1«, programme position »AV« will appear.



- 1 Select the »TV on with« row with »△« or »▽« then select channel position »AV« with »⊖« or »⊕«.
- 2 End the setting by pressing »TXT«.

Picture/sound scale on/off

To adjust volume, brightness and colour contrast, scales appear. These may be switched off.



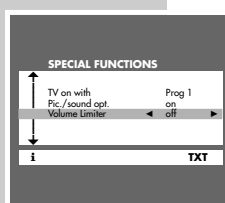
- 1 Select the »Pic./Sound opt.« row with »△« or »▽« then select »off« with »⊖« or »⊕«.
- 2 End the setting by pressing »TXT«.

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CONVENIENCE FUNCTIONS

Equalizing the volume

The volume of normal TV broadcasts and commercials may be different. You may equalize this volume.



- 1 Select the »Volume Limiter« row with »△« or »▽« then select »on« with »⊖« or »⊕«.

Note:

This function is only possible if »off« has been selected in the »Effects« row in the »SOUND« menu.

- 2 End the setting by pressing »TXT«.

Entering a switch-off time in the »SLEEP TIMER« menu

You can input a switch-off time for your TV set via the »SLEEP TIMER« menu. The set switches to stand-by after the set time has elapsed.



- 1 Select the »SLEEP TIMER« row from the »DIALOGUE CENTER« with »△« or »▽« then confirm with »OK«.
- 2 Enter the desired switch-off time (01...99 minutes) with two digits using the »1...0« buttons.

Note:

The switch-off time can be cleared with »AUX«.

- 3 Confirm the setting by pressing »TXT«.

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CONVENIENCE FUNCTIONS

Convenience functions via the »SERVICE« menu

Note:

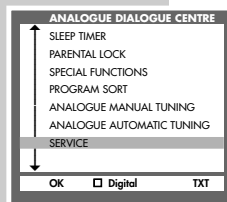
These convenience functions are only possible with analogue TV programmes.

The »Service Code« function is provided for the specialized dealer only.

- 1 Call up the »DIALOGUE CENTRE« by pressing »i« and then »OK«.
- 2 Select the »SERVICE« row from the »DIALOGUE CENTRE« with »▲« or »▼« then confirm with »OK«.

Note:

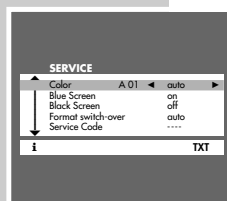
See the following chapters for further operation.



Adjusting manually the colour norm

The colour norms are automatically assigned when allocating the channel position with the automatic station search. You do not need to carry out this setting if the colour is already well adjusted on the different channels.

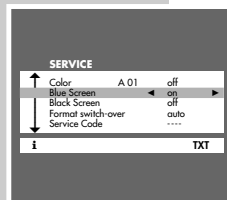
- 1 Select the »Color« row with »▲« or »▼« then select the required colour norm using »◀« or »▶«.
- 2 End the setting by pressing »TXT«.



Selecting a blue picture screen

With this function, a grainy image is switched to a blue image.

- 1 Select the »Blue screen« row with »▲« or »▼« then use »◀« or »▶« to select »on«.
- 2 End the setting by pressing »TXT«.



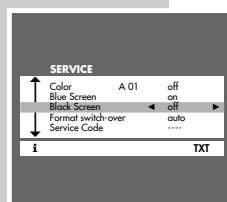
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CONVENIENCE FUNCTIONS

Selecting a black picture screen

With this setting, it is possible to avoid distracting flickering of channels whilst switching channel positions.

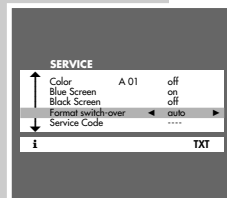
- 1 Select the »Black screen« row with »▲« or »▼« then use »◀« or »▶« to select »on«.
- 2 End the setting by pressing »TXT«.



Picture format switch-over

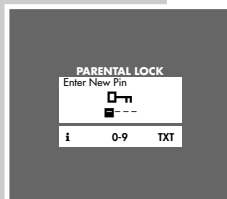
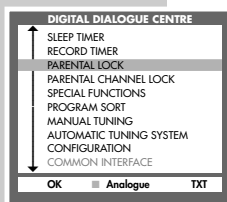
If reception conditions are poor in analogue mode, you may switch off the automatic picture format switchover.

- 1 Select the »Format switch-over« row with »▲« or »▼« then use »◀« or »▶« to select »manual«.
- 2 End the setting by pressing »TXT«.



PARENTAL LOCK

By using this function, you may protect the TV set against unauthorized use.
You may block all functions or certain digital channels.



Blocking all functions of the TV set

Note:

This function can be selected both in the »DIGITAL DIALOGUE CENTRE« and the »ANALOGUE DIALOGUE CENTRE«.

- 1 Call up the »DIALOGUE CENTRE« by pressing »i« and then »OK«.
- 2 Select the »PARENTAL LOCK« row from the »DIALOGUE CENTRE« with »▲« or »▼« then confirm with »OK«.
- 3 Enter a four-digit code number using the »1...0« buttons then save the number with »OK«.
– The key symbol is displayed in red.
- 4 End the setting by pressing »TXT«.
– After switching off the set and switching on again, the page »Parental lock« appears, all functions are locked.

Note:

If you forget the number code, a number combination given in the »CORRECTING PROBLEMS YOURSELF« chapter on page 67 will allow you to unlock the set.

Unlocking the TV set temporarily

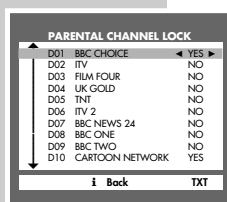
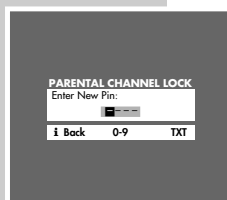
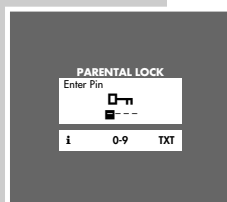
- 1 Switch the TV set on.
- 2 Enter the four-digit code using the »1...0« buttons.
– The TV programme becomes visible.
After switching off the set and switching on again, the parental lock is activated again.

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PARENTAL LOCK

Cancelling the parental lock

- 1 Switch the TV set on and enter the four-digit code using the »1...0« buttons.
– The key symbol is displayed in red.
- 2 Call up the »DIALOGUE CENTRE« by pressing »i« and then »OK«.
- 3 Select the »PARENTAL LOCK« row from the »DIALOGUE CENTRE« with »▲« or »▼« then confirm with »OK«.
- 4 Enter the four-digit code number using the »1...0« buttons then confirm the number with »AUX«.
– The parental lock is cancelled.
- 5 End the setting by pressing »TXT«.



Locking digital services

- 1 Call up the »DIGITAL DIALOGUE CENTRE« by pressing »i« and then »OK«.
- 2 Select the »PARENTAL CHANNEL LOCK« row with »▲« or »▼« then confirm with »OK«.
- 3 Enter a four-digit code number using the »1...0« buttons then store the number with »OK«.
– The »PARENTAL CHANNEL LOCK« menu appears.
- 4 Select the service which is to be locked with »▲« or »▼« then activate the lock with »►«.
– The indication »NO« changes into »YES« and the channel is locked. If the locked service is selected, the TV set demands you to enter the code number.
– To lock further services, repeat the step 4.
- 5 End the setting by pressing »TXT«.

Note:

To unlock the locked services, repeat the setting from step 1, but press »OK« again in step 4.

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MHEG FUNCTIONS

What is MHEG?

The MHEG functions (Multimedia and Hypermedia Experts Group) are an extended and convenient teletext service.

With the MHEG functions and the integrated modem, your TV set is prepared for interactive operation with external devices and TV stations, such as home shopping and homebanking.

The MHEG functions will probably be introduced by the TV broadcasters at the end of 1999.

Please consult your specialized dealer for more information about software updates and retrofit kits via a common interface.

Operation with the MHEG functions

If a station is broadcasting the MHEG service, this is indicated by the yellow LED next to the mains button.

The »**TEXT**«, »**CL**«, », », », and the four colour buttons are automatically switched over to MHEG mode.

Pressing the »**i Activ**« button switches between MHEG mode and normal TV mode.

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MODEM FUNCTIONS

Notes:

Connect your modem socket only to an exchange line.

Do not use the modem as an extension to a pay telephone.

Your TV set is provided with a so-called Ringer Equivalence number. The number is 1.

It is possible to connect further telecommunication devices to the telephone line provided not more than 4 Ringer Equivalence numbers are used.

The modem in your TV set is provided to function with Common Interface (CI) modules.

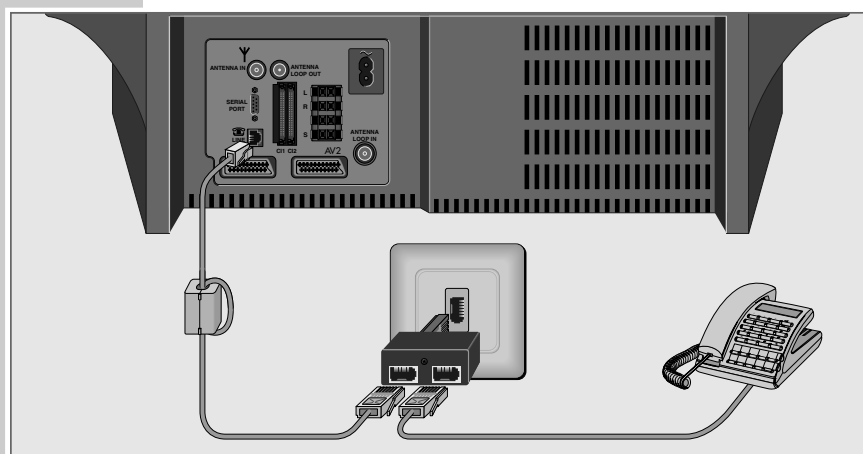
For further instructions see the Common Interface user manual.

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MODEM FUNCTIONS

Connecting the TV set to a telephone socket



- 1 Connect the » **LINE**« socket on the TV set (RJ11 plug) and the telephone adapter (431A plug) with a commercially available modem cable (with ferrite-clip).
- 2 Connect the telephone lead with the second socket on the telephone adapter.
- 3 Plug the telephone adapter into the telephone socket.

Note:

When using a cable without ferrite clip, this must be retrofitted. When doing this, one winding must be inserted through the clip. This clip is available from your Grundig dealer.

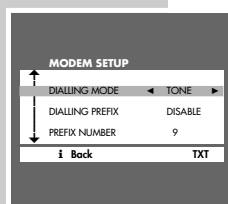
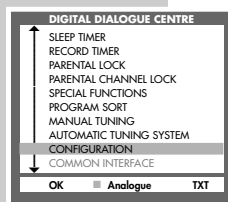
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MODEM FUNCTIONS

Settings for modem operation

With this setting you determine

- the dialling mode.
This requires you to inform the modem of what type of phone line you use (pulse or tone dialling). Pick up and listen to the sound coming from your phone during dialling. If it is continuous, then you must select "TONE", if it is intermittent, then you must select "PULSE"
- the dialling prefix and prefix number.
The TV set may be operated in a place where its use and viewing is communal, for example in offices, schools or shops. If this is the case, the prefix needs to be enabled. This is done by selecting the "ENABLE" setting. In addition, the prefix number (0 to 9) needs to be adjusted to accommodate that of the normal phonelines of the office, school or shop.
If the TV set is used at home, this setting is not required.



- 1 Call up the »DIGITAL DIALOGUE CENTRE« by pressing »« and then »OK«.
- 2 Select the »CONFIGURATION« row with »« or »« then confirm with »OK«.
- 3 Select the »MODEM SETUP« row from the »CONFIGURATION« menu with »« or »« then confirm with »OK«.
– The »MODEM SETUP« menu appears on the picture screen, the »DIALLING MODE« row is highlighted.
- 4 Select your dialling mode with »« or »« : »PULSE« or »TONE«.
- 5 Select the »DIALLING PREFIX« row with »« or »« then use »« or »« to select the »ENABLE« setting.
- 6 Select the »PREFIX NUMBER« row with »« or »« then use the »1 ... 0« buttons to enter the prefix number (0 to 9).
- 7 Press »TXT« to end the setting.

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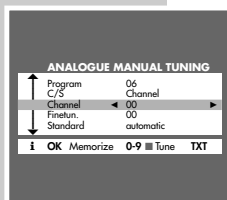
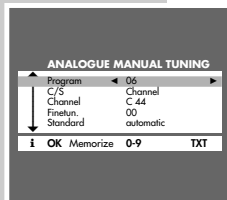
SPECIAL SETTINGS

Limiting the analogue channel position selection

The ATS search saves all channels it has found and automatically "locks" the first position to which no channel is assigned.

In this way, when channel positions are selected step by step using the Δ or ∇ button, only channels which have been found can be selected.

You may also enter this limit manually, in the following example the "lock" has been activated as of channel position 6.



- 1 Call up the »ANALOGUE DIALOGUE CENTRE« by pressing »i« and then »OK«.
– The »ANALOGUE DIALOGUE CENTRE« appears on the picture screen.
- 2 Select the »MANUAL TUNING« row from the »DIALOGUE CENTRE« with Δ or ∇ then confirm with »OK«.
- 3 Select the channel position (6 in the example) with $\odot$ or $\ominus$ or the buttons »1...0«.
- 4 Select the »C/S« row with Δ or ∇ then press $\odot$ or $\ominus$ to select the »Channel« option.
- 5 Select the »Channel« row with Δ or ∇ then use the buttons »1...0« to enter »00«.
- 6 Save the setting with »OK«.
- 7 Press »TXT« to end the setting.

Note:

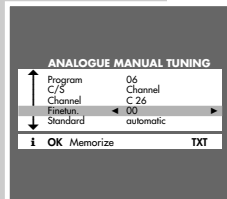
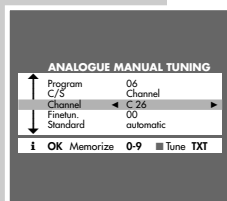
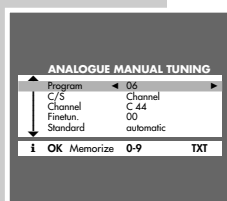
- Now only the first 5 channel positions (and the »AV« positions) can be selected in rapid sequence with the Δ or ∇ button.
 - All single digit channel positions – as well as the "blocked" – can further be selected using the buttons »1...0«.
- All channel positions can be selected using the buttons »1...0« if channel position 11 is blocked.

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SPECIAL SETTINGS

Programming analogue TV channels manually

This setting is only required if, for example, a cable provider adds a new channel and you wish to keep your favourite channel order.



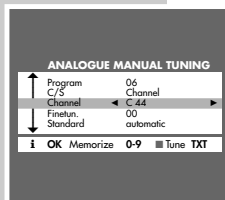
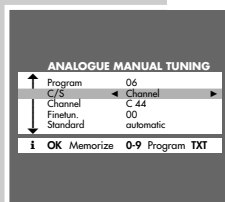
- 1 »Call up the »ANALOGUE DIALOGUE CENTRE« by pressing »i« and then »OK«.
– The »ANALOGUE DIALOGUE CENTRE« appears on the picture screen.
 - 2 Select the »ANALOGUE MANUAL TUNING« row from the »ANALOGUE DIALOGUE CENTRE« with Δ or ∇ then confirm with »OK«.
 - 3 Select the channel position with $\odot$ or $\ominus$ or the buttons »1...0«
 - 4 Select the »C/S« row with Δ or ∇ then use $\odot$ or $\ominus$ to select the »Channel« or »Special Channel« option.
 - 5 Select the »Channel« row with Δ or ∇ then use $\odot$ or $\ominus$ or the buttons »1...0« and enter the desired channel number.
 - 6 Select the »Standard« row with Δ or ∇ then use $\odot$ or $\ominus$ to select the standard required.
 - 7 Fine-tune the picture if necessary. For this, select the »Finetun.« row with Δ or ∇ then use $\odot$ or $\ominus$ to alter the finetuning.
 - 8 Save the setting with »OK«.
- Note:**
To programme further channels, repeat the steps 3 to 8.
- 9 Press »TXT« to end the setting.

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SPECIAL SETTINGS

Programming analogue TV channels using the automatic tuning system



- 1 »Call up the »ANALOGUE DIALOGUE CENTRE« by pressing »i« and then »OK«.
– The »ANALOGUE DIALOGUE CENTRE« appears on the picture screen.
 - 2 Select the »ANALOGUE MANUAL TUNING« row from the »ANALOGUE DIALOGUE CENTRE« with »▲« or »▼« then confirm with »OK«.
 - 3 Select the »Program« row with »▲« or »▼« then enter the desired channel position using the buttons »1...0«.
 - 4 Select the »Channel« row with »▲« or »▼« then start the automatic tuning system with the blue »?« button.
- Note:**
The colour and sound standards are allocated automatically. If the colour and/or sound is not correct, select the row »Standard« with button »▲« or »▼« then select the required setting with the »◀« or »▶« button.
- 5 Fine-tune the picture if necessary. For this, select the »Finetune« row with »▲« or »▼« then use »◀« or »▶« to alter the finetuning.
 - 6 Save the setting with »OK«.

Note:

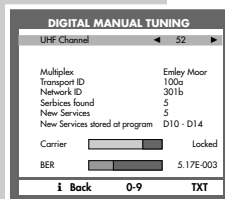
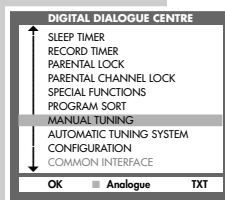
To programme further channels, repeat steps 3 to 6.

- 7 Press »TXT« to end the setting.

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SPECIAL SETTINGS

Programming digital TV services manually



This setting is only required if, for example, a cable provider adds a new service and you wish to keep your favourite service order.

- 1 »Call up the »DIGITAL DIALOGUE CENTRE« by pressing »i« and then »OK«.
– The »DIGITAL DIALOGUE CENTRE« appears on the picture screen.
- 2 Select the »MANUAL TUNING« row from the »DIGITAL DIALOGUE CENTRE« with »▲« or »▼« then confirm with »OK«.
- 3 Enter the channel position with the buttons »1...0«.
– The digital TV channels offered under this channel number are automatically transferred in the programme chart.
– Information about the data transfer is given by the following menu rows:

Multiplex	– System information
Transport ID	– System information
Network ID	– System information
Services found	– number of digital services found.
New Services	– new services among the found services.
New Services	– channel positions on which the new digital services are stored.

Note:

To programme further digital services, repeat step 3.

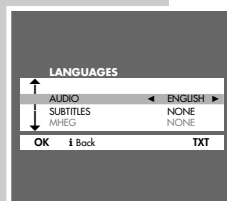
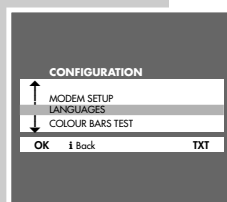
- 4 Press »TXT« to end the setting.

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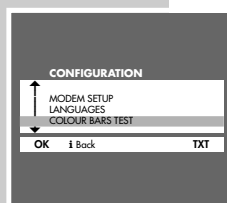
SPECIAL SETTINGS

Selecting the language and subtitles for digital services



- 1 Call up the »DIGITAL DIALOGUE CENTRE« by pressing »1« and then »OK«.
- 2 Select the »CONFIGURATION« row with »▲« or »▼« then confirm with »OK«.
- 3 Select the »LANGUAGES« row from the »CONFIGURATION« menu with »▲« or »▼« then confirm with »OK«.
– The »LANGUAGES« menu appears on the picture screen, the »AUDIO« row is highlighted.
- 4 Select the desired language with »◀« or »▶«.
- 5 Select the »SUBTITLES« row with »▲« or »▼« then use »◀« or »▶« to select the subtitles.
- 6 Press »TXT« to end the setting.

Selecting the colour bars test for displaying the digital picture quality



- 1 Call up the »DIGITAL DIALOGUE CENTRE« by pressing »1« and then »OK«.
- 2 Select the »CONFIGURATION« row with »▲« or »▼« then confirm with »OK«.
- 3 Select the »COLOUR BARS TEST« row from the »CONFIGURATION« menu with »▲« or »▼« then confirm with »OK«.
– The »COLOUR BARS TEST« appears on the picture screen.

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INFORMATION

DVB Common Interface:

2 x

RS 232:

Service and future expansion for update via PC.

Modem:

V 22, V 22 bis
complys to NTR 3
REN = 1



610107

APPROVED for connection to telecommunication systems specified in the instructions for use subject to the conditions set out in them.

Service- und Sonderfunktionen

Die Analog-Software für die Service- und Sonderfunktionen der Punkte 1 – 9 befindet sich im Prozessor IC81050 und EEPROM IC82005.

1. Einschaltfunktionen

1.1 ATS-Reset (Automatic Tuning System)

Netzschalter "EIN" mit gedrückter Fernbedientaste "L+" → OK.
Das Automatische Sendersuchsystem stoppt bei jedem empfangswürdigen Sender (AFC und Koinzidenz) und speichert automatisch die entsprechenden Senderdaten mit dem jeweiligen Standard (die Speicherung findet unmittelbar im NVM statt). Danach wird der Suchlauf fortgesetzt.

Tastendruck "TXT" bricht den ATS-Lauf ab.

1.2 Mittelwerte / Notdatensatz laden (ROM-Daten)

Fernbedientaste "P-" gedrückt halten und das Gerät mit dem Netzschalter einschalten. Dadurch wird z. B. nach Austausch des IC82005 (NVM) das Gerät mit dem Notdatensatz gestartet.
Mit diesem Vorgang werden die Grunddaten aus dem ROM des Prozessors IC81050 in den NVM IC82005 kopiert:

IC82005: (gerätespezifische Daten, über das Dialog Center einstellbar)

- Farb- und Ton-Normen
- Zwangs-Mono
- Umkehrpunkt
- OSD Position
- Blue Screen on/off, Black Screen on/off
- ATS-Reset
- Hotel-Mode on/off
- AGC
- Öko-Schalter
- Bildröhrentype
- Analogwerte (Lautstärke, Helligkeit usw.)
- Bildschärfe
- Overscan
- Security on/off
- Geometrieabgleich
- Programmdatei (Kanal-Feinabstimmung, Senderkennung)

Danach über das Dialog Center die persönlichen Werte, Bildgeometrie eingeben.

1.3 Programmsperre dauerhaft aufheben

Die Zahl **7038** hebt die Sperre dauerhaft auf.

2. Sonderfunktionen im Dialog Center

2.1 Einschalten mit Programm "1" oder "AV"

Mit Taste "1" die Dialogzeile "TV einsch. mit" über "DIALOG CENTER" → "SONDERFUNKTIONEN" aufrufen. In Stellung "AV1" erscheint beim Einschalten das AV-Bild.

2.2 "Bild-/Ton-Skala" ein oder aus für alle Programme

Mit Taste "1" die Dialogzeile "Bild-/Toneinst." über "DIALOG CENTER" → "SONDERFUNKTIONEN" aufrufen. In Stellung "aus" erscheinen keine Balkenanzeigen für die Analogwerte auf dem Bildschirm.

2.3 Automatische Lautstärkeregelung (optionell)

Mit Taste "1" die Dialogzeile "Autom. Lautst." über "DIALOG CENTER" → "SONDERFUNKTIONEN" aufrufen. In Stellung "ein" wird bei großen Senderhöhen die Lautstärke automatisch an den normalen Hub angepaßt.

2.4 Öko-Netzschalter aktivieren bzw. deaktivieren (optionell)

Mit Taste "1" die Dialogzeile "Eco-Switch" über "DIALOG CENTER" → "SONDERFUNKTIONEN" aufrufen. Mit den Tasten ► ◀ "1h...3h" stellen.

Das Gerät schaltet sich nach der eingestellten Zeit oder durch zweimaligen Tastendruck der Taste ⏻ aus dem Standby-Betrieb komplett ab. In Stellung "aus" wird diese Funktion nicht genutzt.

3. Bild-Einstellungen

Grundeinstellung

Mit der roten Taste (Auge) das Bild-Menü aufrufen. Über die Menüführung ist die Regulierung von Kontrast, Bildschärfe und Tint (nur bei NTSC-Quellen) möglich.

Die Analogwerte für Kontrast, Bildschärfe und Tint werden beim Verlassen des Menüs automatisch gespeichert.

4. Ton-Einstellungen

4.1 Tonumschaltung

Mit der blauen Taste (Ohr) das Ton-Menü aufrufen. Je nach Sendernorm sind für die Tonumschaltung verschiedene Einstellungen anwählbar:

- "Mono": bei reinen Mono-Sendungen
- "Mono A / Mono B": bei 2-Ton-Sendungen
- "Stereo / Mono": bei schlechtem Stereo-Ton kann auf Mono geschaltet werden
- "Stereo / Analog"
- "Stereo A / Stereo B / Analog"

Die Werte für Zwangs-Mono, Balance, Bässe, Höhen und ähnliches werden beim Verlassen des Menüs automatisch gespeichert.

4.2 Kopfhörer-Tonumschaltung

Mit der blauen Taste das Ton-Menü aufrufen. Je nach Sendernorm sind für den Kopfhörer verschiedene Einstellungen anwählbar:

- "Mono A / B", unabhängig von den Lautsprechern
 - "Stereo A / Stereo B / Analog", unabhängig von den Lautsprechern
- Bei allen anderen Einstellungen ist der Kopfhörerton mit dem Lautsprecherton fest gekoppelt.

5. Offene Service-Einstellungen

5.1 Maximale Programmnummer (Umkehrpunkt):

Programmnummer aufrufen, ab der die Programmplätze gesperrt werden sollen. Mit Taste "1" die Dialogzeile "MANUELLE ABSTIMMUNG" über das "DIALOG CENTER" aufrufen. Über die Menüführung in der Dialogzeile Kanal "C 00" einstellen. Mit "OK" bestätigen und Menü beenden. Danach können im Programm-Mode mit den Tasten "P+/P-" die nachfolgenden Programme nur bis zu dem mit "C 00" belegten Programmplatz fortgeschaltet werden.

5.2 Farb-Zwangsumschaltung

Mit Taste "1" die Dialogzeile "Farbe" über "DIALOG CENTER" → "SERVICE" aufrufen. Mit den Tasten ► ◀ können Sie in schlechter Empfangslage programmplatzbezogen die automatische Farbumschaltung zwangsweise auf "PAL" oder "NTSC" einstellen.

5.3 Blauen Bildschirmhintergrund abschalten

Mit Taste "1" die Dialogzeile "Blauer Bildschirm" über "DIALOG CENTER" → "SERVICE" aufrufen. In Stellung "aus" ist der blaue Hintergrund (z.B. bei fehlendem Antennensignal) abgeschaltet.

5.4 Schwarzer Bildschirm bei der Programmumschaltung

Mit Taste "1" die Dialogzeile "Schwarz. Bildschirm" über "DIALOG CENTER" → "SERVICE" aufrufen. In Stellung "ein" wird der Bildschirm bei Programmwechsel dunkelgeschaltet.

6. Service-Einstellungen für den Fachhandel

6.1 Service Menü

Mit Taste "1" das Service Menü über "DIALOG CENTER" → "SERVICE" → Service Code aufrufen.

Nach Eingabe der Codezahl "8500" kann der Fachhändler den Geräteabgleich lt. Menüführung durchführen für:

- GEOMETRIE
- WHITE ADJUSTMENT
- AGC
- OSD horizontal
- OSD vertical
- Hotel
- Tube
- Cut-off align

Abgleich: Seite 2-1

6.2 OSD-Lage

Mit Taste "i" die Dialogzeile "OSD" über "DIALOG CENTER" → "SERVICE" → Service Code "8500" aufrufen.

Mit den Tasten ► ◀ können Sie die horizontale, oder vertikale Lage des Einblend-Menüs verschieben und "mit Speich." sichern.

6.3 Hotel-Mode

6.3.1 Hotel-Mode aktivieren

Mit Taste "i" die Dialogzeile "Hotel" über "DIALOG CENTER" → "SERVICE" → Service Code "8500" aufrufen.

Bei aktiviertem "Hotel-Mode" ist:

- der Aufruf des "DIALOG CENTER" mit der Taste "i" nicht mehr möglich.
- die zuletzt eingestellte Lautstärke als maximale Lautstärke gespeichert.

6.3.2 Hotel-Mode ausschalten

Taste "i" der Fernbedienung gedrückt halten und das Gerät mit dem Netzschalter einschalten. Im Menü "SERVICE" Hotel-Mode wieder ausschalten.

6.4 Schutzschaltung deaktivieren

Taste "i" der Fernbedienung gedrückt halten und das Gerät mit dem Netzschalter einschalten. Solange das Service Menü angezeigt wird, wird die Schutzschaltung des Gerätes am Videoprozessor IC34015-(50) nicht ausgewertet.

7. Einstellung der Analogwerte

	Maximalwert	Optimalwert
Helligkeit	63	32
Farbkontrast	63	40
SW-Kontrast	63	48
Lautstärke	63	30
Kopfhörer. Lautst.	63	50
Tint	63	32
Bässe	25	15
Höhen	25	18
Bildschärfe	5	2

Automatische Speicherung der Analogwerte:

Nach ca. 8 Sekunden,
nach Schalten in Standby,
nach Wechsel von TV zu AV,
nach Wechsel der einzelnen AV-Stellungen.

Nach Speicherung der Minimal-Lautstärke erscheint beim Einschalten des Gerätes der Lautstärkebalken für ca. 10 Sekunden.

Mit "AUX" → "OK" können Sie die Optimalwerte für die Ton- und Bildeinstellungen wiederherstellen.

Die Optimalwerte werden aus dem EEPROM IC82005 geladen.

8. Audio-/Video-Anschlüsse

Überspielmöglichkeiten:

AV 1 → AV 2 (EURO-AV1 → EURO-AV2 mit 2 EURO-AV-Buchsen)
AV 2 → AV 1 (EURO-AV2 → EURO-AV1 mit 2 EURO-AV-Buchsen)
AV 3 → AV 1 (Camera → EURO-AV1 mit 2 EURO-AV-Buchsen)

Die Überspielmöglichkeit wird durch Anwahl Taste "0/AV" der Quelle automatisch aktiviert.

Sicherung einer Überspielung:

Nach Anwahl der Quelle durch Taste "0/AV" → Taste "AUX" → Taste "0/AV", Anzeige "kopieren ein" wird die Überspielung gesichert. Es kann in ein anderes Programm umgeschaltet werden. Wiederholung der Tastenfolge hebt das Sichern der Überspielung auf "kopieren aus".

Hinweise:

- Sind bei AV-Anwahl schon alle Videowege belegt, z.B. weil Copy aktiv ist, wird dies erkannt und auf die nächste technisch mögliche AV-Stellung geschaltet:
- Bei allen AV-Stellungen erscheint kein blauer Bildschirm:

AV-Buchsenbeschaltung

Buchse	Eingang	Ausgang	Schaltsignal
AV1	RGB	-	6/12V (Schaltspg.) +1V (Fastblanking)-Auswertung
	FBAS	FBAS	6/12V
	SBAS (Y/C)	FBAS (gewandelt)	6/12V
AV2	RGB	-	6/12V + 1V Auswertung
	FBAS	FBAS	6/12V
	SBAS (Y/C)	FBAS (gewandelt)	6/12V
AV3 Camera	FBAS	-	5V selbst erzeugt aus Sync.

9. Bildformat-Umschaltung

Mit der Fernbedientaste "⏏" kann das Bildformat in Abhängigkeit der Bildschirmgrößen umgeschaltet werden.

Formatumschaltung 4:3 und 16:9 in AV und Programmplatz mit Peribit. Als Indikator dient die an Pin 8 der AV 1- und AV 2-Buchse anliegende Schaltspannung.

- 4:3-Format 12V
- 16:9-Format 6V

Für 16:9 Camcorder-Wiedergabe nötig, um die vertikale Dehnung zu kompensieren, da diese keine 16:9 Schaltspannung liefern.

- Panorama-Format 12V
- Cinema-Format 12V
- Automatic-Format 12V

Nur möglich wenn im Service Menü → Format switch over → "manual" eingestellt wurde.

Im Digital-Modus wird bei Programmwechsel immer das 16:9-Format automatisch ausgewählt.

10. Programmierung der Digital-Software über RS-232 Schnittstelle

10.1 Vorbereitung

Die GRUNDIG-Digital-Software ist über die GRUNDIG-Organisation zu beziehen.

Diese Software **Pcbootld.exe**, **Dos4gw.exe** und das Download-Programm (z.B. Version **gcad1043.s3r**) auf den PC installieren.

Das ausgeschaltete TV-Gerät mit einem PC über die RS-232-Schnittstelle verbinden.

Dazu wird ein Verbindungskabel (handelsüblich) benötigt, an dem jeweils der Pin 2, 3 und 5 der 9-poligen Sub-D-Buchse mit dem 9-poligen Sub-D-Stecker verbunden ist.

10.2 Übertragungseigenschaften:

- Baud rate = 115200
- Parity bits = keine
- Data bits = 8
- Stop bits = 1

10.3 Download der Software

Communications Setup (einmalige Einstellung)

Am PC die Taste "F1" (Comms Setup) drücken → im geöffneten Menü **Com1** (Communications Port: 1) und die Baud rate **115200** einstellen → "ESC"-Taste drücken (zurück zum Haupt-Menü).

Die Taste "F2" (Select File) drücken → Filename z.B. **gcad1043.s3r** des Programms eingeben → "Return"-Taste drücken.

Die Taste "F3" (Download) drücken → Meldung: "Waiting to download" → TV-Gerät einschalten und warten bis die Meldung "Ready" erscheint → TV-Gerät ausschalten und RS-232-Verbindung entfernen.

Das TV-Gerät ist betriebsbereit.

11. Programmierung der Digital-Software über PCMCIA-Card

11.1 Vorbereitung

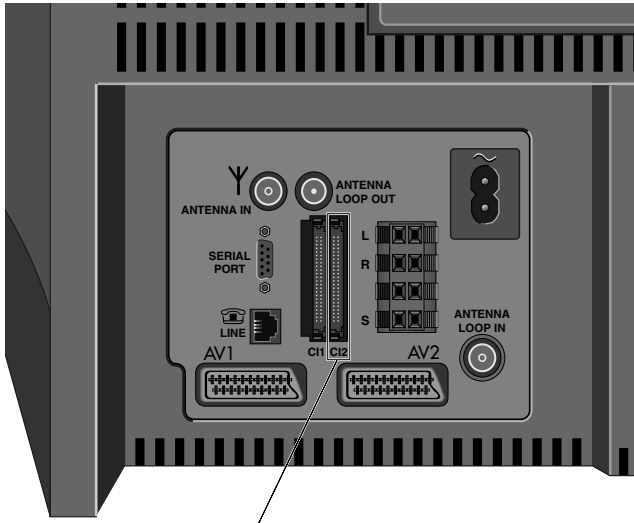
Die GRUNDIG-Digital-Software ist über die GRUNDIG-Organisation zu beziehen.

Diese Software **Pcbootld.exe**, **Dos4gw.exe** und das Download-Programm (z.B. Version **gcad1043.s3r**) auf dem PC installieren.

Die im PC installierte Digital-Software über einen handelsüblichen PC-Anschlußadapter (PCMCIA-Card-Dock) auf eine ebenfalls handelsübliche Flashcard (PCMCIA-Card) laden.

11.2 Download der Software

Um das TV-Gerät mit der neuen Software zu laden, muß die Flashcard bei ausgeschalteten TV-Gerät in die auf der Rückseite des Gerätes befindlichen Buchse CI2 (Common Interface Slot 2) gesteckt werden.



Common Interface Slot 2

Nach dem Einschalten des TV-Gerätes, wird die Software auf der Flashcard erkannt und automatisch geladen. Dabei wird während des ca. 15sec. dauerenden Ladevorgangs auf dem blauen Bildschirm die OSD-Einblendung "Software download" eingeblendet.

Nach dem Ladevorgang schaltet das Gerät automatisch auf TV-Betrieb um.

Das Gerät ausschalten und die Flashcard abziehen.

Auf diese Flashcard kann jederzeit die neueste Digital-Software geladen werden.

Service and Special Functions

The analog software for the Service and Special Functions, points 1 – 9, is stored in the processor IC81050 and EEPROM IC82005.

1. Switching-on Options

1.1 ATS Reset (Automatic Tuning System)

Press the power "ON" button while pressing button "L+" on the Remote Control → OK.

The ATS system stops at every station of acceptable reception quality (AFC and coincidence) and stores the station data and the respective standard automatically (data is stored immediately in the NVM). The system then continues searching.

Pressing the "TXT" button stops the ATS function.

1.2 Loading the Average Values / Emergency Data Set (ROM Data)

Press and hold the "P-" button on the Remote Control and switch on with the mains button. After replacement of IC82005 (NVM) for example, the TV set is started with the emergency data set.

In doing so, the basic data is read out from the ROM of processor IC81050 and loaded into the NVM IC82005:

IC82005: (data specific to the TV can be set via the Dialog Center):

- chroma and audio standards
- forced mono
- reversing point
- OSD position
- blue screen on/off, black screen on/off
- ATS reset
- Hotel Mode on/off
- AGC
- economy switch
- type of picture tube
- analog values (volume, brightness etc.)
- picture sharpness
- overscan
- security on/off
- geometry adjustment
- programme data (channel finetuning, station ident)

Subsequently enter your personal values, picture geometry via the Dialog Center.

1.3 Cancelling the Parental Lock Continuously

To cancel the parental lock enter the number **7038**.

2. Special Functions in the Dialog Center

2.1 Switching on with Programme "1" or "AV"

Reach the "TV on with" menu with button "i" via "DIALOG CENTER" → "SPECIAL FUNCTIONS". In "AV1" position the TV starts with the AV picture.

2.2 Picture/Sound Options On or Off for all Programmes

Reach the "Pict./sound opt." menu via "DIALOG CENTER" → "SPECIAL FUNCTIONS" by pressing button "i". When selecting "off" the scales indicating the analog values do not appear.

2.3 Automatic Volume Control (option)

Reach the "Volume Limiter" dialog via "DIALOG CENTER" → "SPECIAL FUNCTIONS" by pressing button "i". The volume of stations with large deviation is adjusted to normal deviation when selecting "on".

2.4 Activating or Deactivating the Economy Mains Switch (option)

Reach the "Economy mains switch" menu with button "i" via "DIALOG CENTER" → "SPECIAL FUNCTIONS". With the buttons ► ◀ select "1h...3h".

The TV receiver switches off completely from Standby mode at the predetermined time or by pressing the mains button ⏻ twice.

This function is not used when "off" is selected.

3. Picture Settings

Basic Adjustment

Call up the picture settings menu with the red button (eye). Via the menu guide it is possible to change the contrast, picture sharpness and tint (only NTSC sources).

The analog values for contrast, picture sharpness and tint are stored automatically when leaving the menu.

4. Sound Settings

4.1 Sound Switching:

Call up the sound settings menu with the blue button (ear). Different types of sounds are available dependent on the TV standard:

- "Mono": in the case of pure mono transmissions
- "Mono A / Mono B": in the case of 2-channel sound transmissions
- "Stereo / Mono": in the case of poor stereo sound quality, the sound can be switched over to mono
- "Stereo / Analog"
- "Stereo A / Stereo B / Analog"

The forced-mono, balance, bass, treble and similar values are stored automatically when leaving the menu.

4.2 Headphone Sound Switching

Call up the sound settings menu with the blue button. Dependent on the TV standard, different settings are possible for the headphones:

- "Mono A / B", independent of the loudspeakers
- "Stereo A / Stereo B / Analog", independent of the loudspeakers

With all other options, separate selection of the sound for the headphones and loudspeakers is not possible.

5. Open Service Settings

5.1 Maximum Programme Number (reversing point)

Call up the programme number which is to be the highest selectable programme position. With button "1" select the dialog line "MANUAL TUNING" via the "DIALOG CENTER". Following the menu guide, enter "C 00" in the dialog line channel. Confirm with "OK" and terminate the menu. After this setting only those programme positions can be selected with the "P+/P-" buttons in Programme Mode which are lower than the "C 00" position.

5.2 Forced Chroma Switching

Call up the dialog line "Color" via "DIALOG CENTER" → "SERVICE" with button "1". With the buttons ► ◀ it is possible to force the automatic chroma standard switching function into "PAL" or "NTSC" on a per-programme basis under poor reception conditions.

5.3 Switching off the Blue Screen Background

Call up the dialog line "Blue Screen" via "DIALOG CENTER" → "SERVICE" with button "1". When this function is set to "off" the blue background is switched off (e.g. when the aerial signal is missing).

5.4 Black Screen when Changing the Programme

Call up the dialog line "Black Screen" via "DIALOG CENTER" → "SERVICE" with button "1". When this function is set to "on" the screen is blanked when changing the programme.

6. Service Settings for the Dealer

6.1 Service Menu

Call up the Service Menu with button "1" via "DIALOG CENTER" → "SERVICE" → Service Code .

Having entered the code number "8500" the dealer can change the following settings under menu guide:

- GEOMETRY
- WHITE ADJUSTMENT
- AGC
- OSD horizontal
- OSD vertical
- Hotel
- Tube
- Cut-off align
- Overscan
- NTSC 3,6

Alignment: page 2-3

6.2 OSD Position

Call up the dialog line "OSD" with button "1" via "DIALOG CENTER" → "SERVICE" → Service Code "8500".

With the ► ◀ buttons it is possible to shift the on screen display in the horizontal or vertical direction and to store this position "with mem.".

6.3 Hotel Mode

6.3.1 Activating the Hotel Mode

Call up the dialog line "Hotel" with button "1" via "DIALOG CENTER" → "SERVICE" → Service Code "8500".

With activated "Hotel Mode":

- it is no longer possible to call up the "DIALOG CENTER" menu with button "1".
- the last volume setting is stored as the maximum level possible.

6.3.2 Deactivating the Hotel Mode

Depress and hold button "1" on the Remote Control while switching the TV set on with the mains switch. Under the "SERVICE" menu switch the Hotel Mode off.

6.4 Deactivating the Protection Circuit

Depress and hold button "1" on the Remote Control while switching the TV set on with the mains switch. As long as the Service Menu is displayed the protection circuit of the TV set is not evaluated on video processor IC34015-(50).

7. Setting the Analog Values

	Maximum	Optimum
Brightness	63	32
Colour contrast	63	40
Black/white contrast	63	48
Volume	63	30
Headphone volume	63	50
Tint	63	32
Bass	25	15
Treble	25	18
Sharpness	5	2

The analog values are stored automatically:

after about 8 seconds,
on switching to Standby mode,
on switching over from TV to AV mode,
on changing the individual AV settings.

Having stored the minimum volume level the volume indicator bar is displayed for about 10 seconds when switching the TV receiver on. With "AUX" → "OK" it is possible to re-set the optimum values for picture and sound.

The optimum values are read out from EEPROM IC82005.

8. Audio / Video Connectors

Re-recording possibilities:

AV 1 → AV 2 (EURO-AV1 → EURO-AV2 with 2 AV sockets)
AV 2 → AV 1 (EURO-AV2 → EURO-AV1 with 2 AV sockets)
AV 3 → AV 1 (Camera → EURO-AV1 with 2 AV sockets)

Re-recording is activated automatically by selecting button "0/AV" of the source.

Securing a re-recording:

A re-recording is secured by selecting the source with button "0 /AV" → button "AUX" → button "0/AV", indication "copy on". The programme can be changed. The securing function can be cancelled by repeating this sequence: "Copying off".

Notes:

- Should all video signal paths be in use on selection of AV because Copy is active for example, this situation is identified and the TV switches over to the next technically possible AV position.
- The blue screen background does not appear in all AV settings.

AV socket configuration

Socket	Input	Output	Switching Signal
AV1	RGB	-	6/12V (switching voltage) +1V (fastblanking) evaluation
	CCVS	CCVS	6/12V
	SCVS (Y/C)	CCVS (converted)	6/12V
AV2	RGB	-	6/12V + 1V evaluation
	CCVS	CCVS	6/12V
	SCVS (Y/C)	CCVS (converted)	6/12V
AV3 Camera	CCVS	-	5V generated from sync

9. Changing the Picture Format

Dependent on the size of the screen the picture format can be changed using button " " on the Remote Control.

The picture format is changed between 4:3 and 16:9 in AV mode and on the programme position with Peribit.

This status is indicated by the switching voltage applied to pin 8 of the AV 1 and AV 2 socket.

- 4:3 format 12V
- 16:9 format 6V

Is necessary for playing back from a camcorder in 16:9 format to compensate for the vertical expansion because camcorders do not supply the 16:9 switching voltage.

- Panorama format 12V
- Cinema format 12V
- Automatic format 12V

Only possible when the format is set as follows: Service Menu → Format switch over → "manual".

In digital mode, the 16:9 format is always selected automatically when changing the programme.

10. Programming the Digital Software via the RS-232 Interface

10.1 Preparation

The GRUNDIG Digital Software is available from the GRUNDIG organisation.

Install this software, **Pcbootld.exe**, **Dos4gw.exe**, and the download programme (e.g. version **gcad1043.s3r**) on the PC.

Connect the switched off TV set via the RS-232 interface with the PC. For this, a connecting cable (commonly available) is necessary which connects pins 2, 3 and 5 of the 9-pin Sub-D socket with the same pins of the 9-pin Sub-D plug.

10.2 Transfer Specifications:

- Baud rate = 115200
- Parity bits = keine
- Data bits = 8
- Stop bits = 1

10.3 Downloading the Software

Communications Setup (setting made once)

Press button "F1" (Comms Setup) on the PC → enter **Com1** (Communications Port: 1) and the baud rate **115200** in the open menu → press button "ESC" (to return to the main menu).

Press button "F2" (Select File) → enter the File Name of the programme e.g. **gcad1043.s3r** → press the "Return" button.

Press button "F3" (Download) → message: "Waiting to download" → switch the TV set on and wait for the message "Ready" to appear → switch the TV set off and undo the RS-232 connection.

The TV set is ready for operation.

11. Programming the Digital Software via the PCMCIA-Card

11.1 Preparation

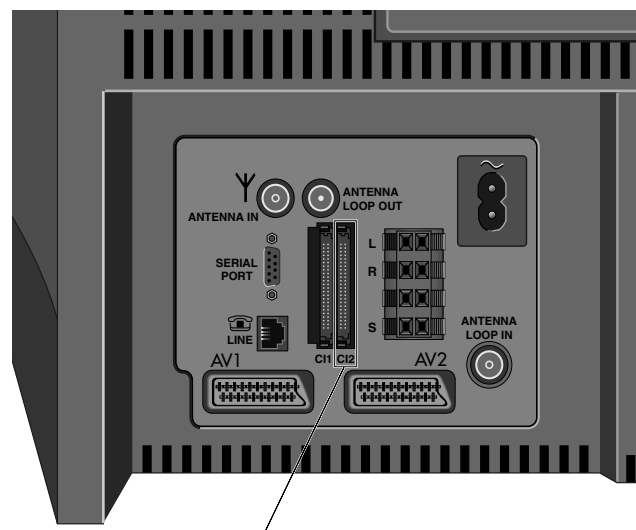
The GRUNDIG Digital Software is available from the GRUNDIG organisation.

Install this software, **Pcbootld.exe**, **Dos4gw.exe**, and the download programme (e.g. version **gcad1043.s3r**) on the PC.

Load the Digital Software installed on the PC via a commonly available PC connecting adapter (PCMCIA-Card-Dock) on to an also commonly available flashcard (PCMCIA-Card).

11.2 Downloading the Software

For storing the new software in the TV set, the flashcard is to be plugged into the socket CI2 (Common Interface Slot 2) on the back of the switched off TV set.



Common Interface Slot 2

On switching the TV set on, the software on the flashcard is identified and automatically loaded. During the loading process lasting about 15sec, the OSD message "Software download" is indicated on the blue screen.

On completion of the loading process the TV switches automatically to normal TV operation. Switch the TV set off and pull the flashcard out.

This flashcard can be loaded at any time with the latest Digital Software.

Ⓓ Abgleich

Achtung!

Nach einer Reparatur bzw. Wechsel des NVM (IC82005) muß kontrolliert werden, ob der NTSC Quarz 3,58MHz bestückt ist. Bei nicht bestücktem Quarz, muß über das Service Menü die Dialogzeile "NTSC 3,6" auf "aus" gestellt werden.

Taste "i" → "OK" → "SERVICE" → "OK" → Service Code "8500" → NTSC 3,6 "aus" und über die Dialogzeile "End" mit "with mem." sichern.

Hinweise!

1. Bei Wechsel des IRDT-Modules ist kein Anpassungsabgleich notwendig.
2. Die Geräte mit IRDT-Baustein können auch ohne diesen Baustein betrieben werden. Werden diese Geräte ohne IRDT-Baustein betrieben, muß die Steckverbindung ST-PIP3 zum YUV-Interface gelöst werden und bei Verwendung der Cinch-Eingänge die Steckverbindung ST-C11 auf dem Keyboard mit der Steckverbindung ST-C11 auf der Chassisplatte verbunden werden. Das TV-Gerät arbeitet dann nur noch im Analog-Betrieb.

Alle nicht beschriebenen Einstellelemente sind werkseitig abgeglichen und dürfen im Service-Fall nicht verstellt werden.

Chassis- / Bildrohrplatte

Meßgeräte: Zweikanal-Oszilloskop, Tastkopf 10:1, Digitalvoltmeter, Farbgenerator, Spektrumanalyser oder HF-Millivoltmeter.

Geometrie-einstellung mit dem Vertikal-Abgleich beginnen!

Servicearbeiten nach Austausch bzw. Reparatur:

- **Netzteil:** Abgleich 1
- **Tuner:** Abgleich 2
- **NVM IC82005:** Abgleich 2...8, 11
- **Zeilen- und Bildablenkung und Bildrohrwechsel:** Abgleich 10...12
- **Brückenspule L53074:** Nur nach unsachgemäßem Eingriff in der Horizontalablenkung notwendig: Abgleich 9

Abgleich	Vorbereitung	Abgleichvorgang
1. +A Spannung	Nach jeder Reparatur und vor jedem Abgleich kontrollieren und gegebenenfalls einstellen. Helligkeit: Minimum Digital-Voltmeter: Kathode D61016	R60037 bzw. R61313 nach Tabelle (Seite 3-18) im Schaltbild Netz-Chassis einstellen.
2. Tuner-AGC	Spektrumanalyser oder HF-Millivoltmeter symmetrisch an Tunerkontakt 10, 11. Senderbild oder Generator über die Antenne einspeisen, 70...80dBµV. Dialogzeile "AGC" über "i" (DIALOG CENTER) → "OK" → SERVICE → "OK" → Service Code "8500" → aufrufen.	Mit den Tasten "◀" oder "+ ▶" 102dBµV (360mV _{ss}) einstellen. Ersatzweise wird ohne Spektrumanalyser oder HF-Millivoltmeter mit den Tasten "◀" oder "+ ▶" das Bild so abgestimmt, daß es gerade zu rauschen beginnt. Dann soweit zurückstellen, bis das Bild wieder rauschfrei wird. Dialogzeile "End" mit "with mem." beenden.
3. OSD	Dialogzeile "OSD" über "i" (DIALOG CENTER) → "OK" → SERVICE → "OK" → Service Code "8500" → aufrufen.	Mit den Tasten "◀" oder "+ ▶" das Menü in die Bildmitte stellen. Dialogzeile "End" mit "with mem." beenden.
4. Bildröhrentyp (Tube)	Dialogzeile "Tube" über "i" (DIALOG CENTER) → "OK" → SERVICE → "OK" → Service Code "8500" → aufrufen.	Mit den Tasten "◀" oder "+ ▶" die richtige Bildschirm-diagonale eingeben. Dialogzeile "End" mit "with mem." beenden.
5. Overscan	Nur bei IC TDA8843 oder TDA8844 sowie bei Philips-Bildröhren 72cm/84cm in 4:3- und 70cm/82cm in 16:9-Format. Dialogzeile "Overscan" über "i" (DIALOG CENTER) → "OK" → SERVICE → "OK" → Service Code "8500" → aufrufen.	Mit den Tasten "◀" oder "+ ▶" auf "aus" stellen. Dialogzeile "End" mit "with mem." beenden.
6. NTSC 3,6	Dialogzeile "NTSC 3,6" über "i" (DIALOG CENTER) → "OK" → SERVICE → "OK" → Service Code "8500" → aufrufen.	Mit den Tasten "◀" oder "+ ▶" je nach Gerät auf "aus" oder "ein" stellen. Dialogzeile "End" mit "with mem." beenden.
7. Mittelpunkt S-Korrektur (Vertical Slope)	Menü "Vertical Slope" über "i" (DIALOG CENTER) → "OK" → SERVICE → "OK" → Service Code "8500" → "GEOMETRIE" → "OK" aufrufen.	Die Mittellinie des Testbildes in der Dialogzeile "Vertical Slope" (typ. 30...33) mit den Tasten "◀" oder "+ ▶" so abgleichen, daß sie gerade noch sichtbar ist. Taste "i" zweimal drücken (GEOMETRIE → SERVICE) und Dialogzeile "End" mit "with mem." beenden. Die Bildgeometrie stellt sich nach jedem Einschalten auf den zuletzt gespeicherten Wert ein.

Abgleich	Vorbereitung	Abgleichvorgang
8. Horizontale Bildlage (Horizontal Shift)	Helligkeit Maximum Dialogzeile "Horizontal Width" (Bildbreite) über "1" (DIALOG CENTER) → "OK" → SERVICE → "OK" → Service Code "8500" → "GEOMETRIE" → "OK" aufrufen und Bildbreite mit den Tasten "◀" oder "▶" verkleinern. Dialogzeile "Horizontal Shift" aufrufen.	Bildinhalt mit den Tasten "◀" oder "▶" mittig ins Raster stellen. (Horizontal Width) Bildbreite wieder nach Testbild einstellen. Mit dem Stecker "ST-Shift" am Chassis (optional), das Testbild in die Bildschirmmitte stellen. Dieser Stecker kann je nach Bildröhrensteuerung auch nachbestückt, verdreht aufgesetzt, oder im Widerstandswert verändert werden. Taste "1" zweimal drücken (GEOMETRIE → SERVICE) und Dialogzeile "End" mit "with mem." beenden. Die Bildgeometrie stellt sich nach jedem Einschalten auf den zuletzt gespeicherten Wert ein.
9. Brückenspule L53074	Die Brückenspule L53074 wird in der Fertigung abgeglichen und sollte nicht verdreht werden. Dialogzeile "Horizontal Width" über "1" (DIALOG CENTER) → "OK" → SERVICE → "OK" → Service Code "8500" → "GEOMETRIE" → "OK" aufrufen. Horizontal Width (Bildbreite) auf Minimum stellen. Oszilloskop Kanal 1: Kollektor T53001. Oszilloskop Kanal 2: Kathode D53072.	Gleiche Impulsbreite der Oszillogramme kontrollieren und gegebenenfalls mit Spule L53074 abgleichen. Bildbreite nach Testbild einstellen.
10. Fokus	- Konvergenztestbild einspeisen. - Bildformat auf 16:9 einstellen (bei 16:9 Geräten). - Kontrast (ⓘ) Maximum. - Bildschirmhelligkeit (☉) so einstellen, daß der schwarze Testbildhintergrund sich gerade aufzuhellen beginnt.	Mit dem Fokusregler ☉ auf der Bildrohrplatte die vertikalen Linien ca. 5cm vom rechten und linken Bildrand auf kleinste horizontale Breite einstellen. Die Mittenschärfe darf nicht schlechter als die Randschärfe erscheinen, ggf. mitteln.
11. Weißwert	Grautreppe mit Burst einspeisen. Kontrast (ⓘ) Maximum. Farbkontrast (Ⓢ) Mittelwert. Bildschirmhelligkeit (☉) Mittelwert. Dialogzeile "WHITE ADJUSTMENT" über "1" (DIALOG CENTER) → "OK" → SERVICE → "OK" → Service Code "8500" aufrufen.	Mit den Tasten "◀" oder "▶" die Werte für "Grün" bzw. "Blau" so einstellen, daß das Testbild unbunt wird. Kontrolle des Weißabgleichs mit Kontrast Minimum und Maximum. Dialogzeile "End" mit "with mem." beenden.
12. Schirmgitterspannung U_{G2}	Dialogzeile "Cut-off align" über "1" (DIALOG CENTER) → "OK" → SERVICE → "OK" → Service Code "8500" aufrufen. Mit "OK" bestätigen.	Mit dem Einstellregler U_{G2} auf der Bildrohrplatte den zuerst erscheinenden roten, grünen, blauen oder mischfarbenen Strich gerade gut sichtbar einstellen. Mit "OK" zurück ins Menü.

GB Alignment

Attention!

After any repair or replacement of NVM (IC82005) check whether the NTSC 3.58MHz quartz is fitted. If it is not, the dialog line "NTSC 3,6" in the Service Menu must be set to "off".

Button "i" → "OK" → "SERVICE" → "OK" → Service Code "8500" → NTSC 3,6 "off" and in dialog line "End" store the setting "with mem."

Notes!

1. When changing the IRDT module no matching is necessary.
2. The TV receivers with IRDT Module can also be operated without this module. When operating these TV sets without the IRDT module, the connector ST-PIP3 to the YUV interface is to be detached. When using the Cinch inputs, the connector ST-CI1 on the keyboard is to be connected to the connector ST-CI1 on the chassis board. In this way, the TV set works only in analog mode.

All adjustment controls not mentioned in this description are pre-set at the factory and must not be re-adjusted in the case of repairs.

Chassis / CRT Panel

Measuring instruments: Dual-channel oscilloscope, 10:1 test probe, digital voltmeter, colour video generator, spectrum analyser or RF millivoltmeter

Service works after replacement or repair of the following modules:

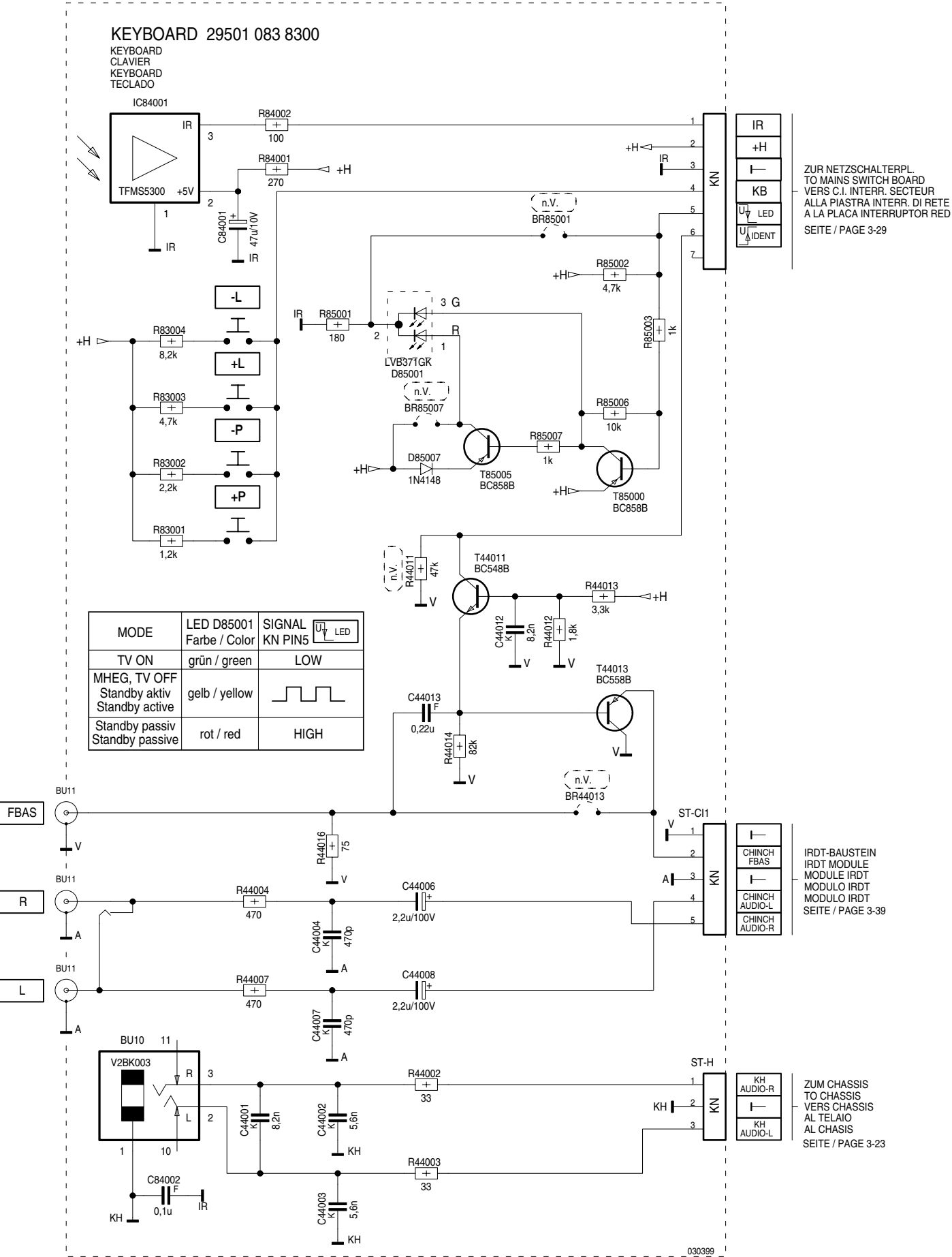
- **Power supply:** alignment 1
- **Tuner:** alignment 2
- **NVM IC82005:** alignment 2...8, 11
- **Horizontal and vertical deflection and replaced picture tube:** alignment 10...12
- **Bridge Coil L53074:** only necessary in the case of inexpert manipulation of the horizontal deflection: alignment 9

Alignment	Preparations	Alignment Process
1. +A voltage	This voltage must be checked and re-adjusted if necessary after every repair and before every alignment. Brightness: Minimum Digital voltmeter: Cathode D61016	Adjust R60037 or R61313 acc. to the table (page 3-18) on the power supply circuit diagram.
2. Tuner AGC	Spectrum analyser or RF millivoltmeter symmetrical to tuner contact 10, 11. Feed in a standard test pattern or generator via the aerial, 70...80dBµV. Call up the dialog line "AGC" via "i" (DIALOG CENTER) → "OK" → SERVICE → "OK" → Service Code "8500".	Adjust 102dBµV (360mV _{pp}) with button "◀-" or "+ ▶". Alternatively, without using a spectrum analyser or RF millivoltmeter, adjust the picture with button "◀-" or "+ ▶" so that noise just appears on the screen. Then reset until the picture is again free of noise. Dialog line "End", terminate "with mem".
3. OSD	Call up the dialog line "OSD" via "i" (DIALOG CENTER) → "OK" → SERVICE → "OK" → Service Code "8500".	With button "◀-" or "+ ▶" position the menu in the middle of the picture. Dialog line "End", terminate "with mem".
4. Tube (Type of picture tube)	Call up the dialog line "Tube" via "i" (DIALOG CENTER) → "OK" → SERVICE → "OK" → Service Code "8500".	With button "◀-" or "+ ▶" enter the correct screen diagonal. Dialog line "End", terminate "with mem".
5. Overscan	Only for IC TDA8843 or TDA8844 as well as with Philips picture tubes 72cm/84cm in 4:3 and 70cm/82cm in 16:9 format. Call up the dialog line "Overscan" via "i" (DIALOG CENTER) → "OK" → SERVICE → "OK" → Service Code "8500".	Set to "off" with button "◀-" or "+ ▶". Dialog line "End", terminate "with mem".
6. NTSC 3.6	Call up the dialog line "NTSC 3,6" via "i" (DIALOG CENTER) → "OK" → SERVICE → "OK" → Service Code "8500".	Set to "off" or "on" with button "◀-" or "+ ▶" dependent on the type of television receiver. Dialog line "End", terminate "with mem".
7. Vertical Slope	Call up the "Vertical Slope" menu via "i" (DIALOG CENTER) → "OK" → SERVICE → "OK" → Service Code "8500" → "GEOMETRY"	Adjust the center line of the test pattern in the dialog line "Vertical Slope" (typ. 30...33) with button "◀-" or "+ ▶" so that it is just still visible. Press button "i" twice (GEOMETRY → SERVICE) and terminate the dialog line "End" with "with mem". The picture geometry is adjusted to the value last stored whenever the TV set is switched on.

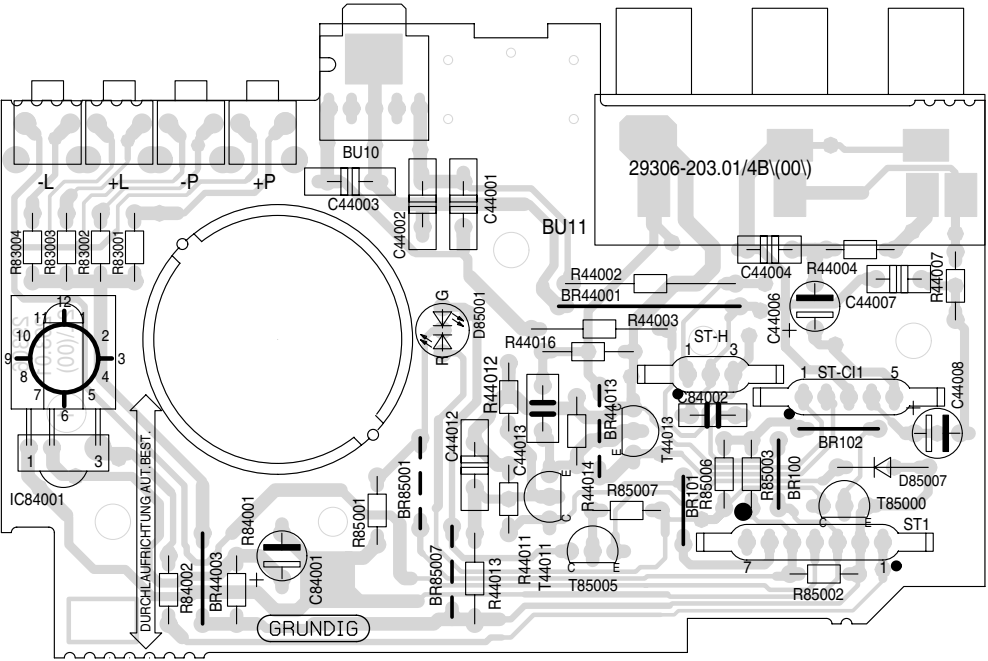
Alignment	Preparations	Alignment Process
8. Horizontal Shift	Brightness Maximum. Call up dialog line "Horizontal Width" via "i" (DIALOG CENTER) → "OK" → SERVICE → "OK" → Service Code "8500" → "GEOMETRY" → "OK" and reduce the width of the picture using button "◀" or "+ ▶". Call up dialog line "Horizontal Shift".	Position the picture content in the middle of the raster using button "◀" or "+ ▶". Re-adjust the horizontal width according to the test pattern. With connector "ST-Shift" on the chassis (option), position the test pattern in the middle of the screen. Dependent on the scanning spread of the picture tube this connector may be retrofitted, connected the other way round, or the rating of the resistor may be changed. Press button "i" twice (GEOMETRY → SERVICE) and terminate the dialog line "End" with "with mem.". The picture geometry is adjusted to the value last stored whenever the TV set is switched on.
9. Bridge Coil L53074	Bridge coil L53074 is adjusted in the factory and this setting must not be changed. Call up dialog line "Horizontal Width" via "i" (DIALOG CENTER) → "OK" → SERVICE → "OK" → Service Code "8500" → "GEOMETRY" → "OK". Set Horizontal Width to minimum. Oscilloscope channel 1: collector T53001. Oscilloscope channel 2: cathode D53072.	Check the oscillograms for the same pulse width and re-adjust it if necessary with coil L53074 . Adjust the horizontal width according to the test pattern.
10. Focus	- Feed in a convergency test pattern. - Set the 16:9 picture format (with 16:9 TV sets). - Contrast (ⓘ) to maximum. - Set the screen brightness (☼) so that the black background of the test pattern just starts to brighten.	With focus control  on the picture tube panel, adjust the vertical lines approx. 5cm from the right and left picture edge to minimum horizontal width. The sharpness in the middle must not seem to be worse than the sharpness at the edges. If necessary, take an average.
11. White Balance	Feed in a grey scale test pattern with burst. Contrast (ⓘ) to maximum. Colour contrast (Ⓢ) to mid-position. Screen brightness (☼) to mid-position. Call up dialog line "WHITE ADJUSTMENT" via "i" (DIALOG CENTER) → "OK" → SERVICE → "OK" → Service Code "8500".	With button "◀" or "+ ▶" set the values for "Green" or "Blue" so that the picture becomes achromatic. Check the white balance at minimum contrast and maximum contrast. Terminate the dialog line "End" with "with mem.".
12. Screen Grid Voltage U_{G2}	Call up dialog line "Cut-off align" via "i" (DIALOG CENTER) → "OK" → SERVICE → "OK" → Service Code "8500". Confirm with "OK".	With adjustment control U_{G2} on the picture tube panel, adjust the line appearing first - red, green, blue or mixed-colour - so that it is just well visible. Return to the menu with "OK".

Platinenabbildungen und Schaltpläne / Layout of the PCBs and Circuit Diagrams

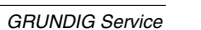
Keyboard



Bestückungsseite, Ansicht von oben / Component Side, Top View



Bestückungsseite, Ansicht von oben / Component Side, Top View



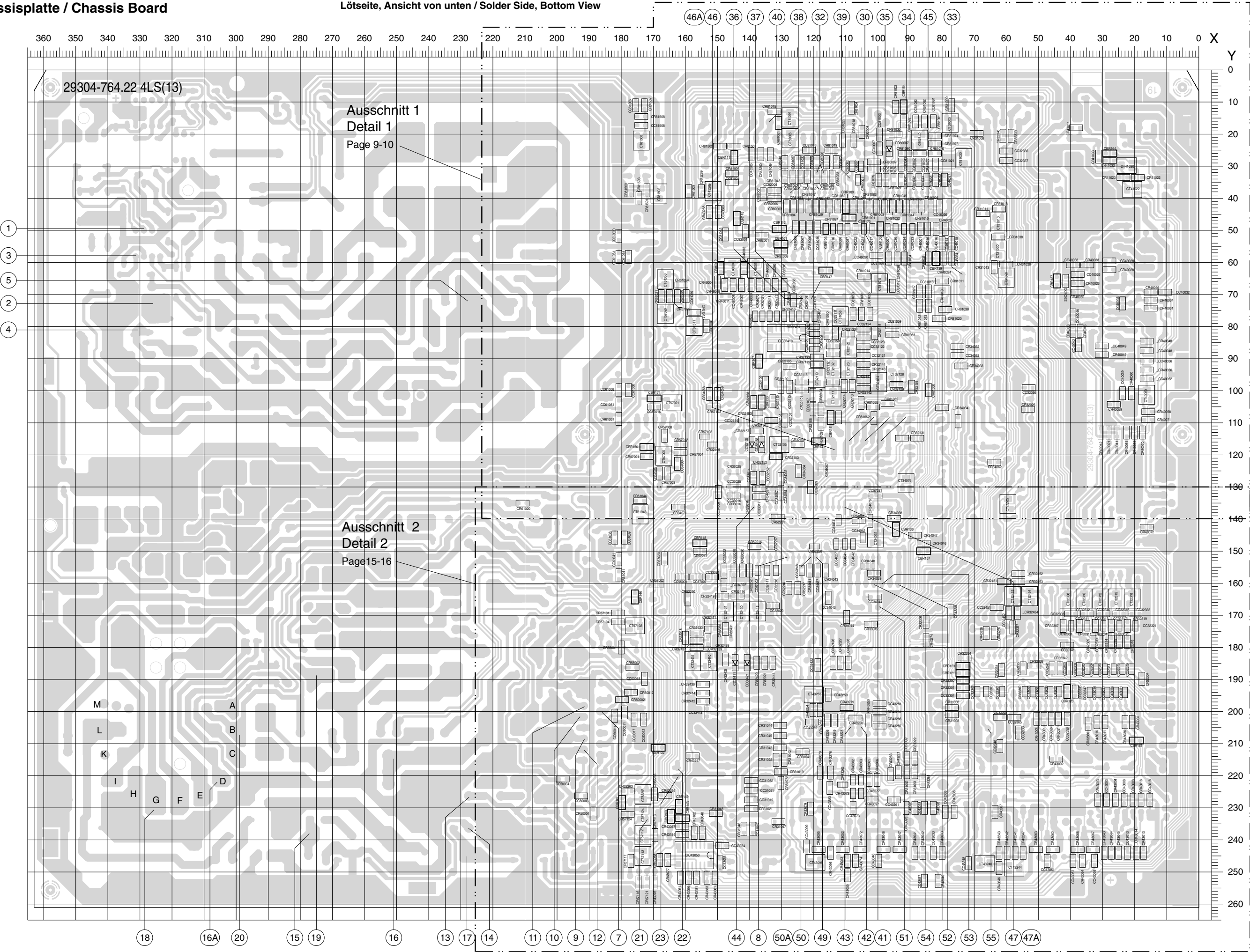
Chassisplatte**Koordinaten für die Bauteile der Bestückungsseite (Oberseite)**

Pos.-Nr./ Pos. No.	Koordinaten/ Coordinates		Pos.-Nr./ Pos. No.	Koordinaten/ Coordinates		Pos.-Nr./ Pos. No.	Koordinaten/ Coordinates		Pos.-Nr./ Pos. No.	Koordinaten/ Coordinates		Pos.-Nr./ Pos. No.	Koordinaten/ Coordinates		Pos.-Nr./ Pos. No.	Koordinaten/ Coordinates	
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AN30	344	251	BR184	167	28	BR43052	142	250	C34021	127	128	C60016	325	35			
AN31	10	251	BR185	88	89	BR43057	165	245	C34041	116	160				D61026	317	154
ASIS01	135	21	BR186	59	117	BR43061	61	222				C60022	213	98	D61036	290	136
ASIS02	135	31	BR187	138	26				C34063	156	155	C60023	238	73	D61056	298	124
						BR43097	95	192	C40011	23	61	C60024	196	81	D81012	81	77
ASIS03	98	29	BR189	141	26	BR43098	162	234	C40012	28	36	C60026	228	65	D81020	110	65
ASIS04	131	43	BR190	135	26	BR43245	108	211	C40014	18	81	C60027	215	65			
ASIS05	131	46	BR192	264	246	BR43255	106	211	C40061	19	74				D81051	118	65
ASIS06	74	67	BR194	190	11	BR43257	160	90				C60036	346	34	D81052	121	65
ASIS07	147	86	BR195	275	16				C40062	29	49	C60037	317	57	D81053	123	65
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ASIS08	144	83	BR196	199	211	BR43278	96	183	C41011	31	20	C61016	345	154			
ASIS09	94	111	BR197	209	246	BR43281	108	195	C41022	13	36	C61017	346	179	EU-AV01	39	244
ASIS10	104	110	BR198	192	144	BR46022	125	109	C41032	15	29				EU-AV02	99	244
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ASIS12	159	151	BR206	93	105				C43002	29	220	C61027	296	152	F32020	139	180
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ASIS13	170	44	BR208	43	9	BR52006	215	241	C43012	10	230	C61037	264	128	F32109	127	102
ASIS14	147	91	BR209	195	226	BR53001	269	220	C43017	21	220	C61042	192	136	F32121	99	89
BR102	170	178	BR212	127	183	BR53011	239	150	C43022	42	222				F32410	148	198
BR104	114	14	BR213	101	108	BR53076	289	178				C61052	192	123			
BR105	61	125	BR214	98	23				C43027	48	222	C61056	296	127	F32412	139	168
BR106	154	108				BR53077	287	178	C43032	73	226	C61057	280	123	F33025	145	125
BR107	123	16	BR215	156	214	BR53078	296	187	C43037	55	222	C61063	175	52			
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BR108	117	14	BR217	121	117	BR55001	184	188	C43098	124	228				IC32420	116	185
BR109	120	16	BR218	45	230	BR55002	196	190				C61311	338	15	IC34015	124	144
BR110	347	236	BR219	185	94				C43249	69	239	C62021	195	25	IC40000	33	74
BR111	284	148				BR55003	177	199	C43266	95	225	C62022	195	19	IC43280	107	211
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BR113	148	74	BR222	49	147	BR55007	189	235	C50013	195	149				IC60010	328	54
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BR124	161	25	BR228	71	33	BR61028	175	100	C52002	193	236				IC80000	106	25
BR126	131	121	BR232	158	59	BR61307	328	21				D31001	69	144	IC81050	105	46
BR127	199	167	BR233	108	77				C52003	200	234	D31007	73	15	IC82000	138	50
BR128	203	155				BR61308	327	6	C52004	226	221	D32128	82	95	IC82005	138	39
BR129	186	184	BR234	240	106	BR61312	341	15	C52006	213	234	D40064	10	77			
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BR130	208	165	BR236	29	55	BR62501	264	76	C52254	156	169				IND02	22	231
BR131	191	160	BR238	80	84	BR62502	241	45				D43284	71	168			
BR132	121	214	BR239	73	98				C53001	290	221	D43292	53	140	L31043	125	201
BR133	168	137				BR62503	239	25	C53002	253	228	D50011	189	184	L32023	67	111
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			BR243	47	37	BR81007	162	30	C53007	264	221	D50014	190	219	L32109	131	109
BR136	233	85	BR245	65	25	BR81020	63	77	C53009	234	244				L32342	53	165
BR139	80	92	BR246	335	49	BR81033	63	74				D50016	199	194			
BR140	60	90	BR247	41	177				C53011	304	246	D52001	200	241	L43098	162	234
BR142	104	46				BR81041	69	33	C53013	235	236	D53003	293	205	L46021	104	61
BR144	63	81	BR248	45	215	BR81042	66	38	C53016	353	220	D53071	242	220	L46022	125	110
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BR147	211	132	BR31002	74	128	BR81061	161	50	C53031	292	188				L53001	270	239
BR150	194	166	BR31003	56	128	BR82006	132	26				D54001	319	169			
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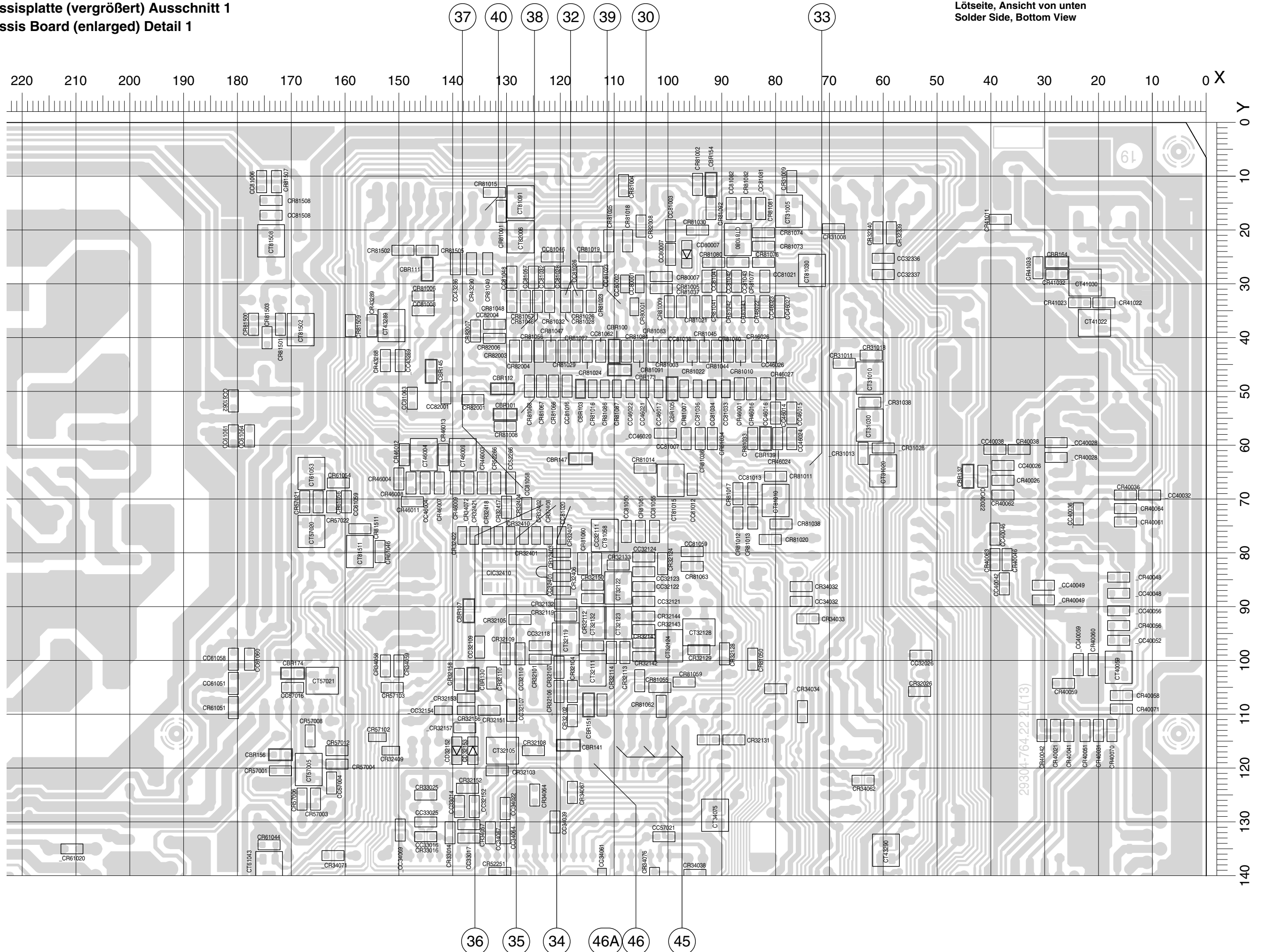
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Q34044	102	167	R52006	215	241	R60032	316	31	ST-CI01	61	15	_BR34073	80	117	_ST-KA	97	125
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R50003	169	220	R60009	274	100	R81504	161	33									

Chassisplatte / Chassis Board

Lötseite, Ansicht von unten / Solder Side, Bottom View



Lötseite, Ansicht von unten
Solder Side, Bottom View

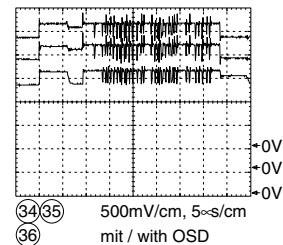
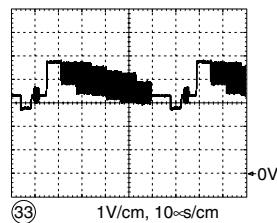
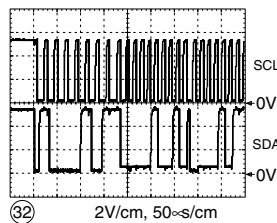
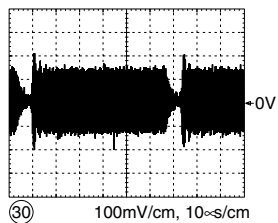
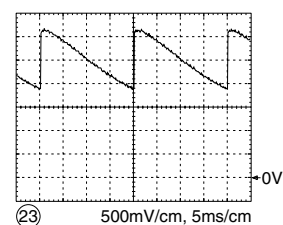
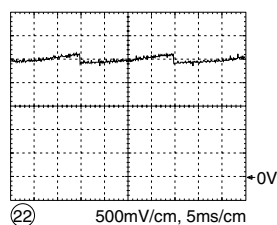
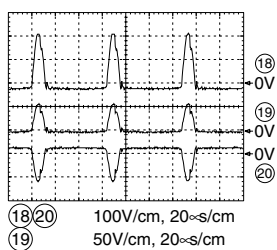
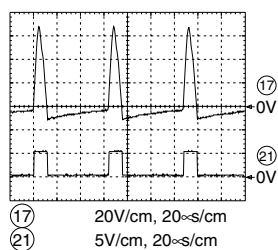
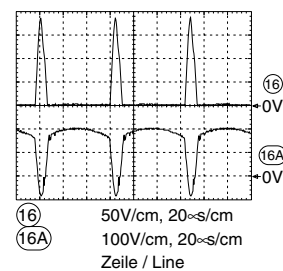
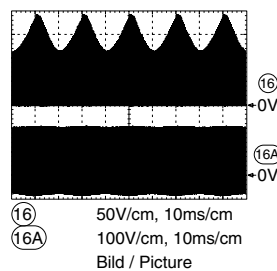
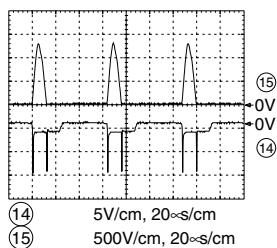
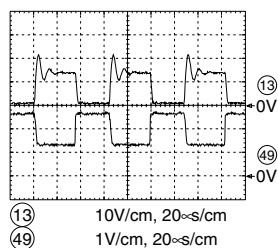
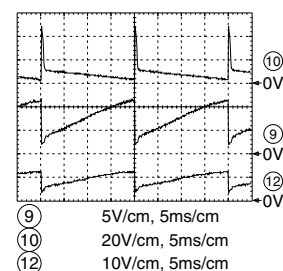
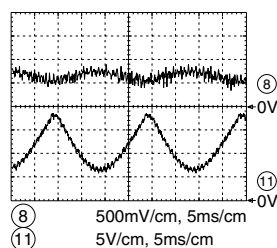
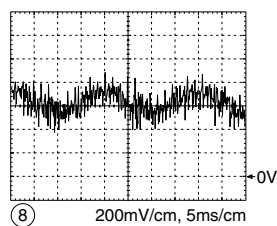
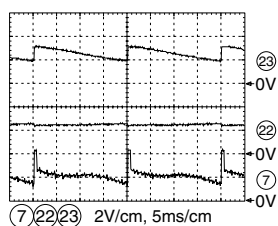
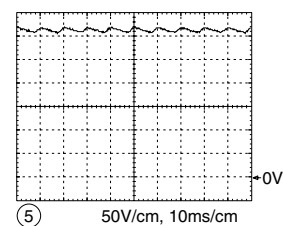
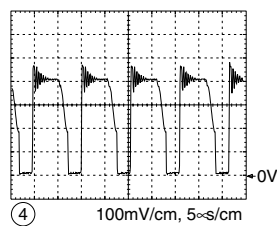
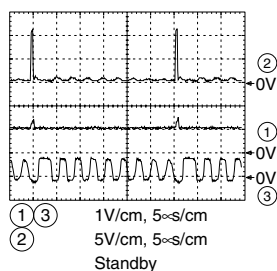
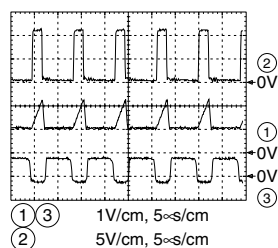


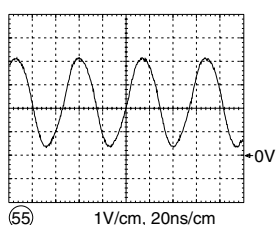
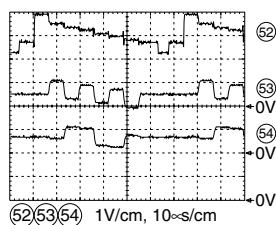
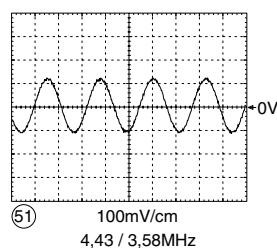
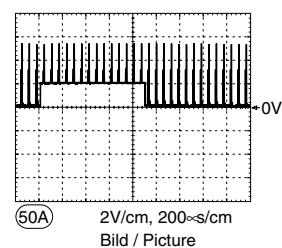
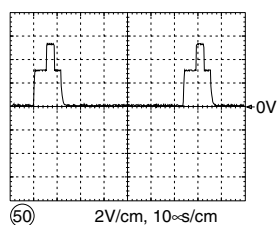
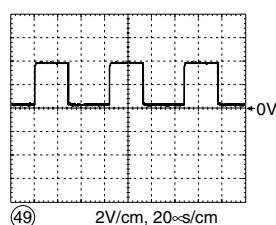
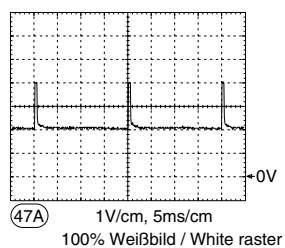
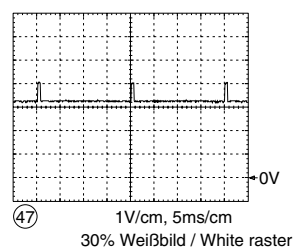
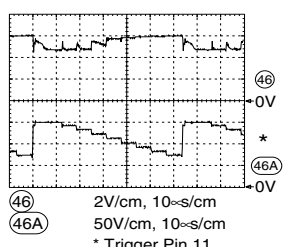
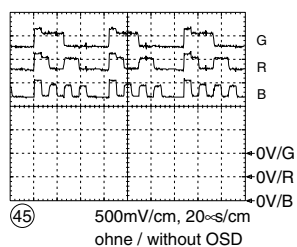
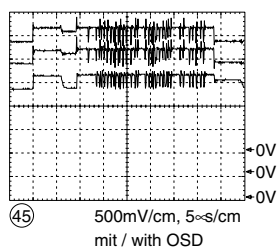
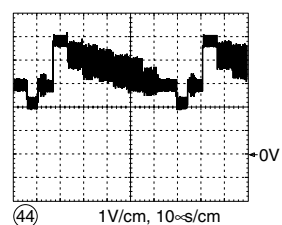
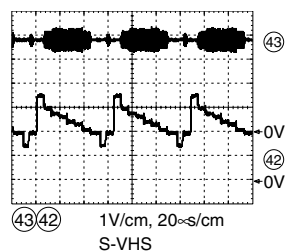
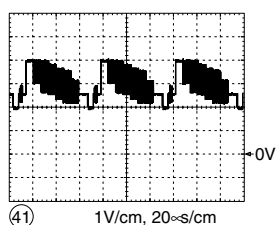
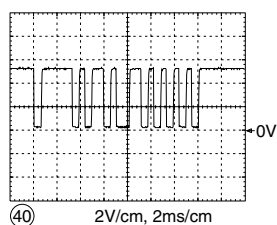
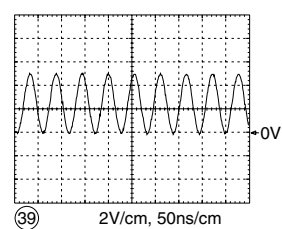
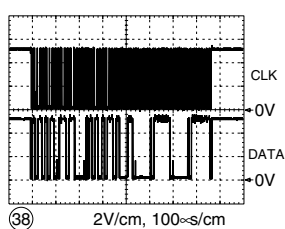
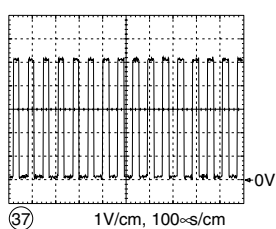
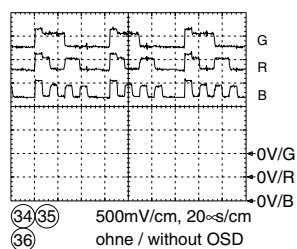
Chassisplatte**Koordinaten für die Bauteile der Lötseite (Unterseite)**

Pos.-Nr./ Pos. No.	Koordinaten/ Coordinates		Pos.-Nr./ Pos. No.	Koordinaten/ Coordinates		Pos.-Nr./ Pos. No.	Koordinaten/ Coordinates		Pos.-Nr./ Pos. No.	Koordinaten/ Coordinates		Pos.-Nr./ Pos. No.	Koordinaten/ Coordinates		Pos.-Nr./ Pos. No.	Koordinaten/ Coordinates	
	X	Y		X	Y		X	Y		X	Y		X	Y		X	Y
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CBR101	130	54	CC32347	34	194							CR43001	48	202	CR43001	48	202
CBR102	168	211	CC32348	62	211	CC46023	82	34	CIC32410	128	84	CR32336	38	194	CR43002	44	215
CBR103	116	49	CC32350	42	186	CC46024	77	59	CIC43050	157	245	CR32337	58	174			
CBR105	99	49				CC46026	81	43				CR32338	51	186	CR43003	32	228
			CC32365	58	202	CC46027	79	34	CR31003	77	201	CR32339	58	20	CR43006	51	202
CBR107	137	91	CC32401	120	87	CC50003	192	226	CR31006	77	199	CR32340	61	20	CR43008	20	228
CBR109	165	233	CC32412	155	194				CR31008	69	20				CR43011	29	203
CBR111	145	27	CC32422	119	185	CC50004	198	221	CR31009	77	11	CR32360	35	204	CR43013	17	244
CBR112	131	49	CC33014	139	128	CC50011	179	200	CR31011	67	45	CR32364	62	187			
CBR120	41	194				CC50012	173	203				CR32401	127	77	CR43016	32	203
			CC33016	145	133	CC50014	182	201	CR31019	130	219	CR32402	125	77	CR43018	18	228
CBR121	73	188	CC33017	137	133	CC50017	176	203	CR31021	140	230	CR32403	120	82	CR43021	44	202
CBR123	73	186	CC33018	145	156				CR31022	132	215				CR43023	91	230
CBR130	136	103	CC33020	133	167	CC52216	132	156	CR31029	89	215	CR32404	130	72	CR43026	46	202
CBR136	94	143	CC33021	152	158	CC52217	133	148	CR31039	91	215	CR32406	120	84			
CBR137	44	66				CC52246	128	161				CR32407	120	80	CR43028	83	230
			CC33022	148	156	CC52248	124	156	CR31041	124	213	CR32408	122	77	CR43031	21	203
CBR139	82	59	CC33025	145	130	CC52266	129	67	CR31042	129	215	CR32409	151	117	CR43033	80	244
CBR141	117	109	CC34022	130	127				CR31043	131	211				CR43036	23	203
CBR143	161	233	CC34027	113	148	CC55001	161	158	CR31044	131	204	CR32410	129	77	CR43038	76	231
CBR145	144	46	CC34032	75	89	CC57004	163	123	CR31045	131	208	CR32411	152	172			
CBR146	176	164				CC57007	157	158				CR32412	155	197	CR43040	81	253
			CC34037	119	156	CC57016	170	105	CR31046	141	236	CR32416	144	164	CR43041	89	244
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CBR149	162	229	CC34042	105	146	CC61038	182	146	CR31051	89	219	CR32418	134	77	CR43044	27	244
CBR151	112	108	CC34043	116	165	CC61039	179	146	CR31052	91	219	CR32419	149	164			
CBR156	172	117				CC61041	181	152				CR32420	138	185	CR43045	25	244
			CC34044	101	164	CC61051	181	104	CR32021	135	185	CR32431	148	174	CR43046	98	243
CBR157	86	150	CC34061	112	140	CC61058	181	100	CR32026	53	106	CR32432	148	184	CR43047	93	243
CBR161	20	209	CC34064	130	132				CR32101	124	100				CR43048	155	238
CBR164	28	26	CC34067	133	132	CC61059	160	71	CR32102	114	107	CR33014	141	132	CR43051	161	252
CBR167	180	228	CC40022	42	66	CC61060	178	100	CR32103	132	120	CR33018	160	177			
CBR173	109	46				CC61061	181	58				CR33019	102	173	CR43052	111	243
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			CC40046	39	77				CR32107	120	101				CR43055	109	251
CC31019	140	228	CC43001	49	194	CC80001	105	30	CR32108	125	117	CR34032	75	86	CR43056	159	252
CC31051	140	224	CC43003	29	228	CC80002	108	30	CR32109	130	99	CR34033	74	92			
CC31052	140	222				CC80007	99	25				CR34038	95	140	CR43057	161	236
CC32026	53	99	CC43006	52	194	CC81003	99	20	CR32110	133	103	CR34039	101	157	CR43058	168	246
CC32109	135	98	CC43008	23	228	CC81006	175	11	CR32111	114	97	CR34040	103	155	CR43061	151	252
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CC32123	105	84	CC43021	43	194	CC81016	119	49	CR32124	101	82	CR34046	86	148	CR43072	106	243
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CC32303	66	194	CC43031	23	194	CC81026	116	29	CR32132	119	90	CR34061	106	141	CR43077	166	246
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			CC43036	26	194				CR32141	105	97				CR43079	118	219
CC32306	69	194	CC43038	79	231	CC81032	122	29	CR32142	105	99	CR34064	125	125	CR43095	118	243
CC32307	40	173	CC43046	100	247	CC81033	89	49	CR32143	105	94	CR34067	118	125			
CC32308	40	169				CC81034	92	49				CR34076	102	141	CR43096	115	244
CC32309	32	187	CC43047	86	253	CC81036	94	49	CR32144	105	92	CR40021	28	113	CR43097	102	227
CC32310	29	187	CC43055	149	247	CC81038	98	43	CR32150	114	86	CR40026	38	67	CR43181	157	252
			CC43057	39	247				CR32300	73	190				CR43182	157	238
CC32311	35	173	CC43058	33	247	CC81041	93	30	CR32301	73	192	CR40031	20	113	CR43183	153	252
CC32312	35	169	CC43061	47	247	CC81042	90	30	CR32302	54	194	CR40041	25	113			
CC32313	30	173				CC81043	87	30				CR40046	37	81	CR43184	161	238
CC32314	27	187	CC43073	108	230	CC81046	122	25	CR32303								

Pos.-Nr./ Pos. No.	Koordinaten/ Coordinates		Pos.-Nr./ Pos. No.	Koordinaten/ Coordinates		Pos.-Nr./ Pos. No.	Koordinaten/ Coordinates		Pos.-Nr./ Pos. No.	Koordinaten/ Coordinates		Pos.-Nr./ Pos. No.	Koordinaten/ Coordinates				
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CR43263	105	221	CR57002	169	160	CR81028	119	33	CR81507	173	11	CT57113	173	245	_CR31018	62	43
CR43265	66	175	CR57003	166	126	CR81029	119	43	CR81508	174	15				_CR31028	60	61
CR43266	100	221	CR57004	161	119	CR81030	94	20	CR81509	159	38	CT57124	173	232			
CR43267	63	231	CR57006	168	126	CR81031	89	49	CR81511	157	76	CT61043	174	139	_CR31038	63	52
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CR43271	94	219	CR57008	167	114	CR81032	122	33	CR82001	136	52	CT81010	80	70	_CR32151	133	109
CR43274	85	178	CR57012	161	117	CR81033	84	59	CR82003	128	43	CT81015	99	67	_CR32152	137	124
CR43276	115	219	CR57021	167	71	CR81034	92	59	CR82004	126	43				_CR32153	138	107
CR43277	105	226	CR57022	165	71	CR81035	92	49	CR82006	132	40	CT81030	73	28			
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CR43283	96	219	CR57113	169	238	CR81040	89	43	CT31010	63	48	CT81508	174	22			
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CR43287	99	204	CR57124	178	232	CR81044	91	43	CT32111	114	102	OM02	28	253	_CR32436	155	192
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CR52247	125	161	CR81014	104	64	CR81076	82	26	CT43244	58	249	_CC40049	30	86			
CR52250	159	165	CR81015	132	13	CR81077	87	26	CT43246	67	247	_CC40052	16	96	_CR61020	211	135
									CT43255	120	195	_CC40056	16	91	_CR81003	100	43
CR52251	131	139	CR81016	114	49	CR81081	83	16	CT43289	151	38	_CC40059	24	101	_CR81024	115	43
CR52252	140	156	CR81017	87	69	CR81082	86	16				_CC43289	150	44	_CR81064	75	109
CR52253	170	226	CR81018	108	22	CR81083	103	43	CT43290	59	135				_CR81065	72	28
CR52254	166	226	CR81019	115	25	CR81084	108	43	CT46004	145	62	_CC46020	100	58			
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CR52256	120	149	CR81021	95	34	CR81087	109	49	CT57005	167	120	_CC81063	148	51			
CR52263	178	225	CR81022	96	43	CR81500	177	38				_CC81081	83	16	_CT32435	158	184
CR52266	132	67	CR81023	114	33	CR81501	172	38	CT57020	166	76				_CT32440	153	184
CR55001	180	180	CR81025	111	22	CR81502	149	24	CT57021	164	104	_CD32152	139	117	_CT32453	58	164
CR55002	176	186	CR81026	117	33	CR81503	175	40	CT57103	176	173	_CD32153	136	117	_CT32454	53	164

Oszillogramme Chassis / Oscillograms Chassis



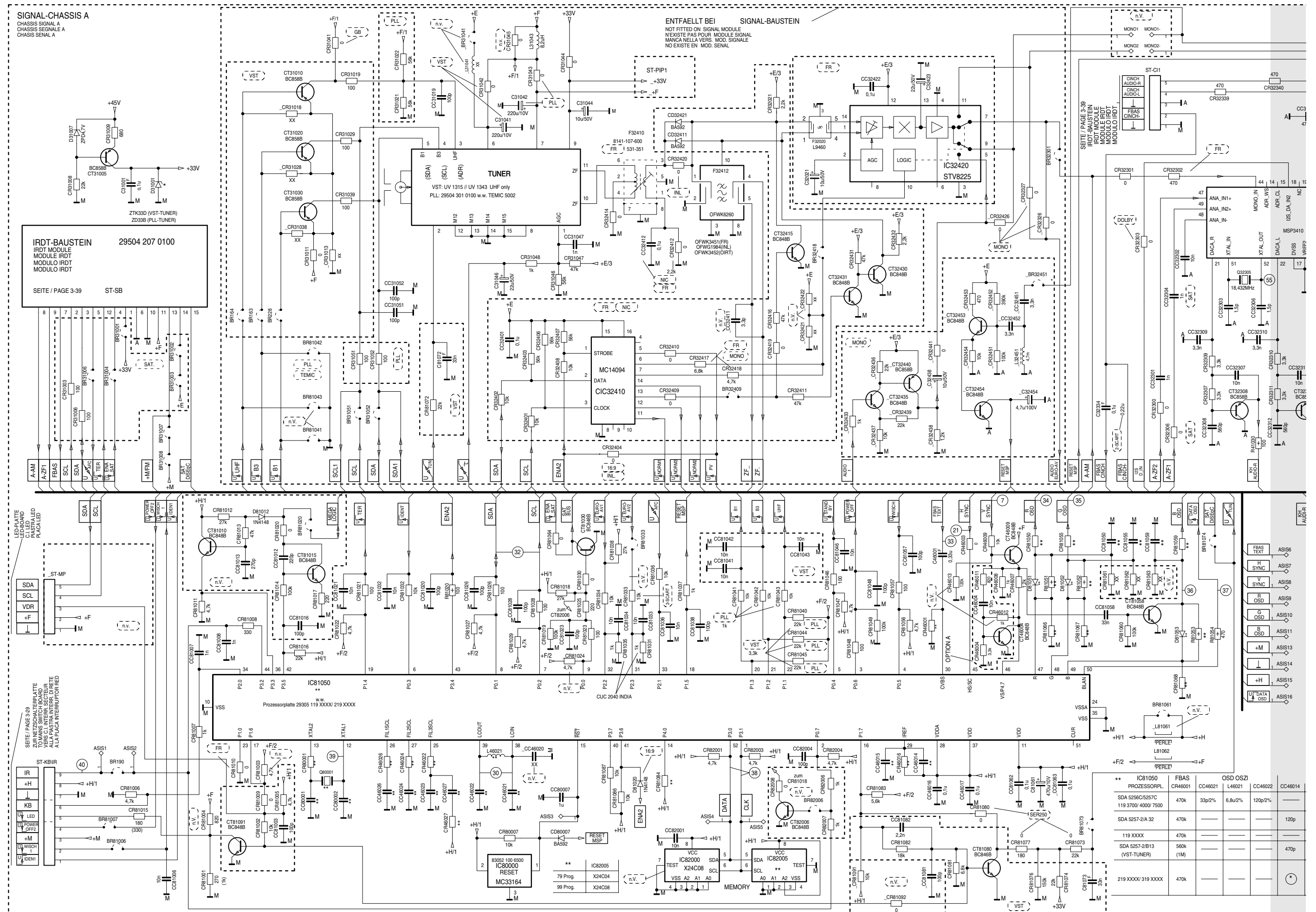


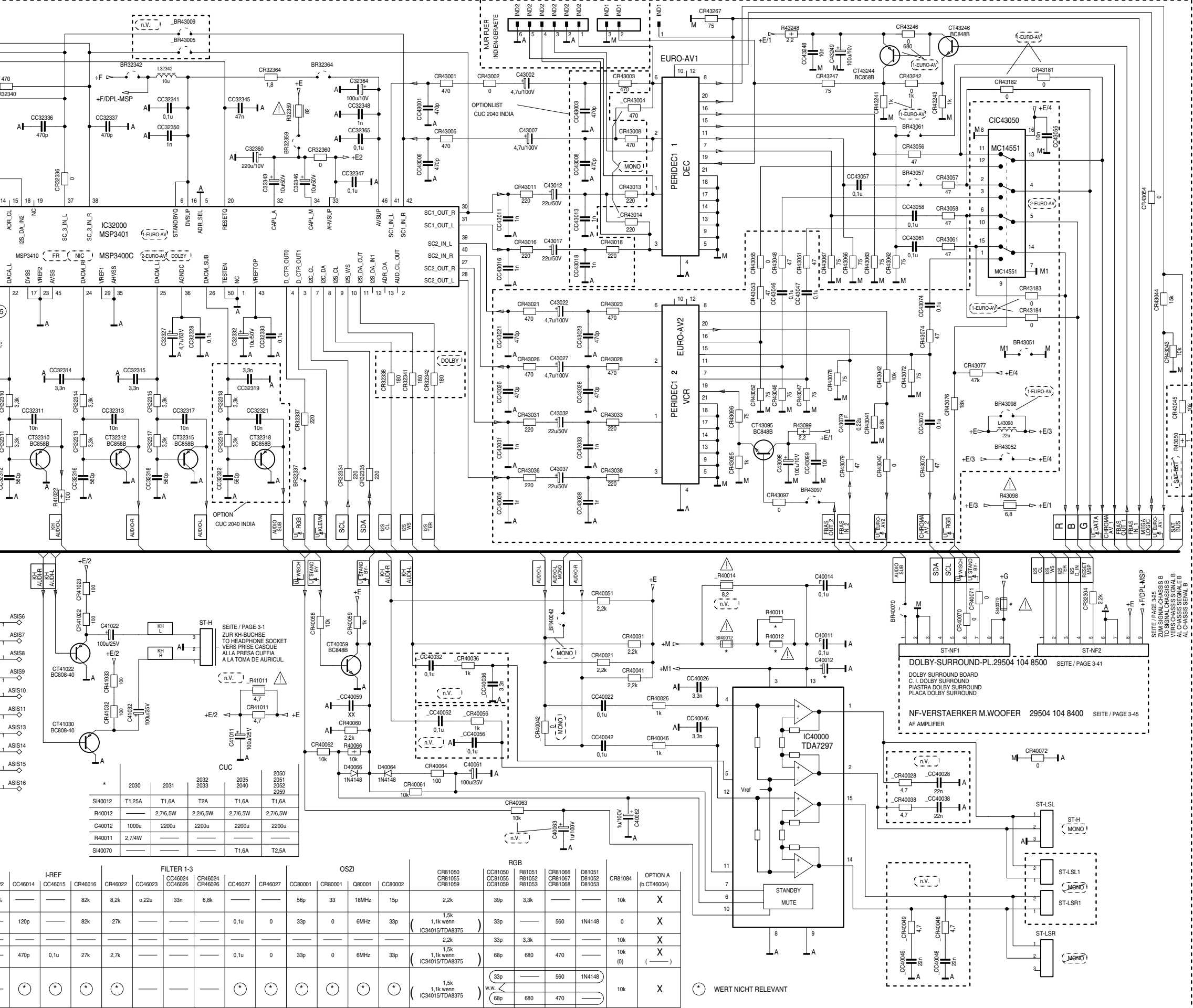
Lötseite, Ansicht von unten
Solder Side, Bottom View







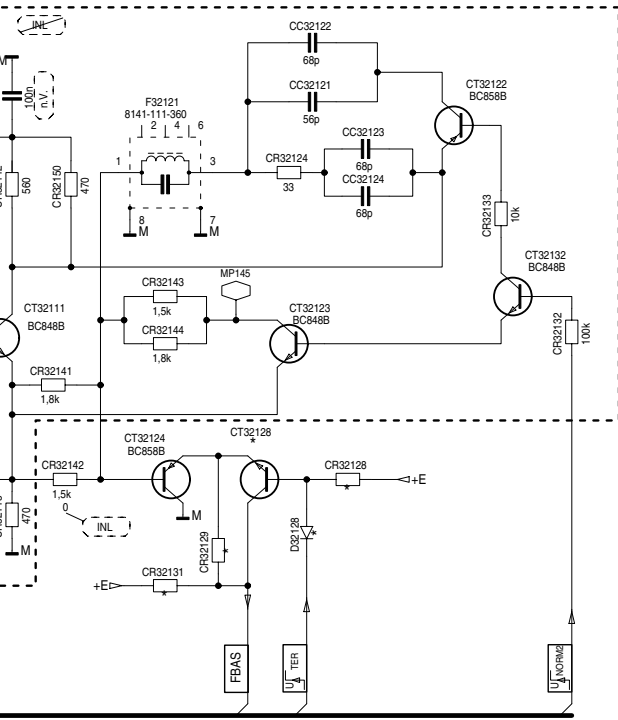




IC32000			
PIN	V	PIN	V
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2	2,2	28	3,6
3	0	29	0
4	0	30	3,6
5	0	31	3,6
6	5,0	32	5,4
7	5,0	33	7,0
8	4,8	34	6,0
9	2,5	35	0
10	2,5	36	3,6
11	2,5	37	3,6
12	1,5	38	3,6
13	1,1	39	3,6
14	1,1	40	3,6
15	1,1	41	3,6
16	5,0	42	3,6
17	0	43	2,5
18	1,5	44	3,6
19	0	45	0
20	5,0	46	4,9
21	1,5	47	1,4
22	1,5	48	1,4
23	0	49	1,8
24	0	50	0
25	0	51	2,3
26	0	52	2,0

IC40000			
PIN	V	PIN	V
1	7,3	9	0
2	7,3	10	0
3	14,6	11	0
4	1,5	12	1,5
5	0	13	14,6
6	5,0	14	7,3
7	5,5	15	7,3
8	0		





	STANDART DEFAULT	CUC2040 INDIA
CR43003/08	470	0
CR43013/18	220	0
CC43003/08	470p	—
CC43013/18	1n	—
CR81047/56	4,7k	2,7k
CR81035/31	—	1k
SUBWOOFER	—	×
CR81015	180/330	0
CR81004	—	820
CR81001	270/1k	330
CR32342	—	180

R34063	CC34064	CR34067	CR32131	CR32129	CT32128	D32128	CR32128	VIDEO MATRIX	CC34067	CR34067	CC32304	CR32306	CR81064
100	0	—	—	—	BC848B	1N4148	4,7k	—	0	—	—	—	—
100	0	—	—	—	BC848B	1N4148	4,7k	—	0	—	1n	0	0
470	0,1u	470	4,7k	0	—	—	—	A	0,1u	470	—	—	—
470	0,1u	470	—	—	BC848B	1N4148	4,7k	A	0,1u	470	1n	0	0
100	0	—	—	—	BC848B	1N4148	4,7k	—	0,1u	470	—	—	—
470	0,1u	470	4,7k	0	—	—	—	B	0,1u	470	—	—	—
470	0,1u	470	—	—	BC848B	1N4148	4,7k	B	0,1u	470	1n	0	0

2030 VIDEOCOLOR	2031 2051	2031 2051	2058	2058	2059	2059	2080	2080 VC
63cm SF 72cm SF	63cm SF 72cm SF	82cm/16:9 72cm SF	82cm/16:9 PHI	82cm/16:9 VC	70cm/16:9 PHI	70cm/16:9 VC	84cm PHI	84cm VC
TDA8375	TDA8843/44	TDA8375	TDA8843/44	TDA8843/44	TDA8843/44	TDA8843/44	TDA8843/44	TDA8843/44
470k	1M	1M	470k	470k	470k	470k	470k	1M
3.9k	2.7k	2.7k	2.7k	2.7k	3.3k	3.3k	2.7k	2.7k
3.9k	2.7k	2.7k	2.7k	2.7k	3.3k	3.3k	2.7k	2.7k
1.1k	1k	1.1k	1k	1.1k	1k	1.3k	1k	1k

SIGNAL-CHASSIS
CHASSIS SIGNAL
CHASSIS SEGNALE
CHASSIS SENAL

CUC 2058
CUC 2059

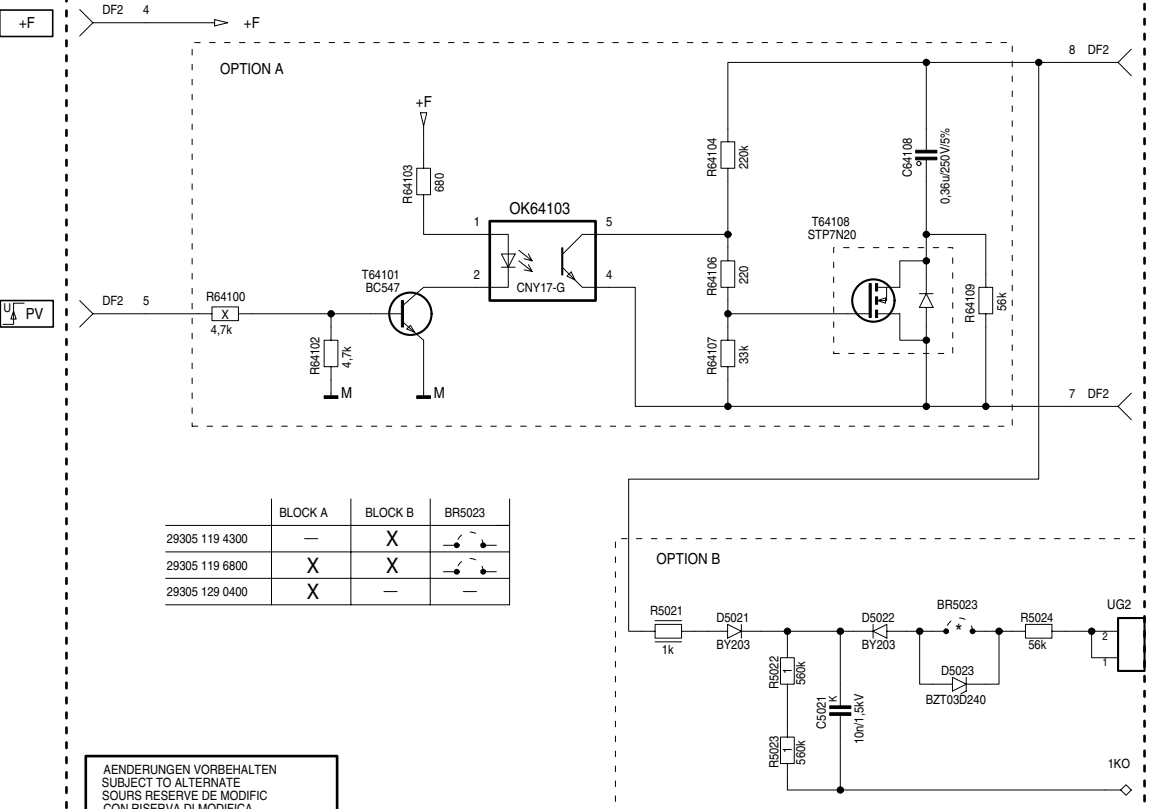
** CUC	2030- 2040 INL/NIC	2030- 2040 INL/NIC	2030- 2040 FR	2050 - 2080 INL/NIC	2050 - 2080 FR	2030- 2040 INL/NIC	2030- 2040 FR
IC34015	TDA8843N1	TDA 8375	TDA 8375	TDA8843N2	TDA8844N2	TDA8843N2	TDA8844N2
Ersatz- Featurepl.	—	29305 119 4500	29305 119 4200	29305 119 3500	29305 119 3500	—	—
CR32101	820/560	820/560	560	680/470	470	680/470	470
CC33021	—	—	1u	—	—	—	—
CC33022	—	—	1u	—	1u	—	1u
CR33016	—	—	6,8M	—	6,8M	—	6,8M
CR33018	6,8k	6,8k	0	6,8k	0	6,8k	0
CR34044/34046/34047	—	—	—	0	0	—	—
BR34038/34039	—	—	—	×	×	—	—
CR34039/34040	0	—	—	—	—	0	0
CR34038	0	0	0	—	—	0	0
CR34041	—	0	0	0	0	—	—
C34041	220u/10V	—	—	—	—	220u/10V	220u/10V
CR34043	—	0	0	—	—	—	—
C33019	4,7u/100V	4,7u/100V	4,7u/100V	2,2u/100V	2,2u/100V	2,2u/100V	2,2u/100V
F33025	-391	-391	-391	—	—	—	—
CR33025	—	8,2k	8,2k	—	—	—	—
CC33025	1,5p	3,9p	3,9p	—	—	—	—
R34057/34058/34059	1,5k	1,2k (1,1k wenn IC8150 29305 219 xxxx)	1,2k	1,5k	1,5k	1,5k	1,5k
R34031	—	2,2k	2,2k	—	—	—	—
CR34032	390	0	0	390 (3,9k)	390 (3,9k)	390 (3,9k)	390 (3,9k)
CR34033	560	3,3k	3,3k	560 (5,6k)	560 (5,6k)	560 (5,6k)	560 (5,6k)
CC34032	330p	220p	220p	(33p)	(33p)	(33p)	(33p)
CC34037	0,1u	0	0	0,1u	0,1u	0,1u	0,1u
CC34039	0,22u	0,1u	0,1u	0,22u	0,22u	0,22u	0,22u
BR57021	×	—	—	×	×	×	×
D57021	—	BAT42	BAT42	—	—	—	—
R34056	8,2k	470	470	8,2k	8,2k	8,2k	8,2k

IC8150-SDA515657
(IC8150-SDA52572)

010299
21641 907 0200

Panorama View

PANORAMA VIEW 29305 119 6800
129 0400
UG2-SHIFT 29305 119 4300



	BLOCK A	BLOCK B	BR5023
29305 119 4300	—	X	—
29305 119 6800	X	X	—
29305 129 0400	X	—	—

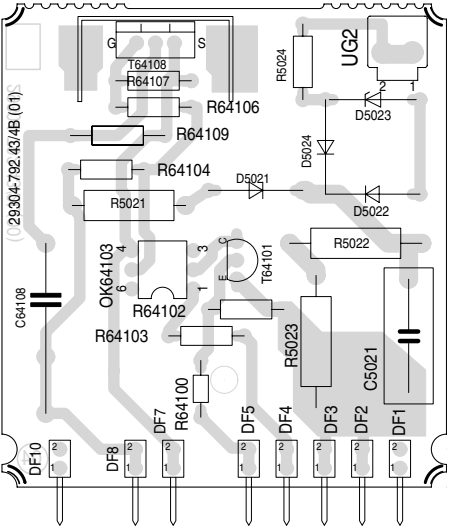
ÄNDERUNGEN VORBEHALTEN
SUBJECT TO ALTERNATE
SOURS RESERVE DE MODIFIC
CON RISERVA DI MODIFICA
RESERV. EL DERECH. DE MODIFIC.

ZUR BR-PLATTE
TO CRT PANEL
VERS. C.I.TUBE CATH.
ALL APPIASTRA CINESC.
A LA PLACA-ZOCALO

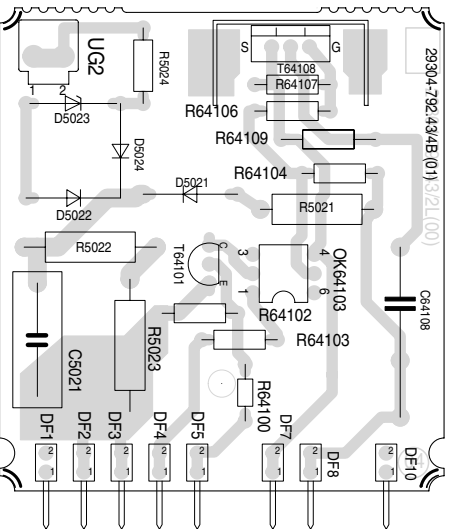
SEITE / PAGE 337

190199

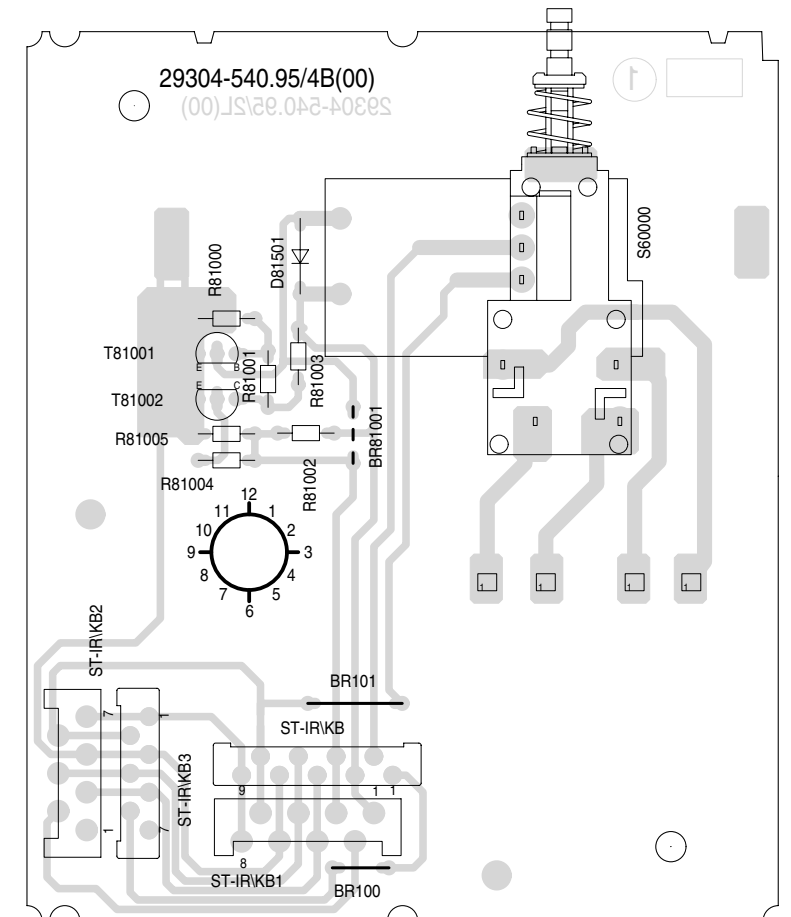
Bestückungsseite, Ansicht von oben
Component Side, Top View



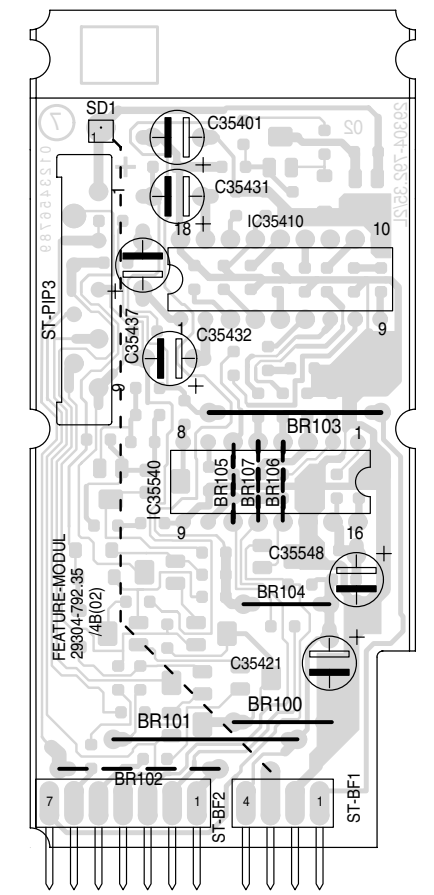
Lötseite, Ansicht von unten
Solder Side, Bottom View



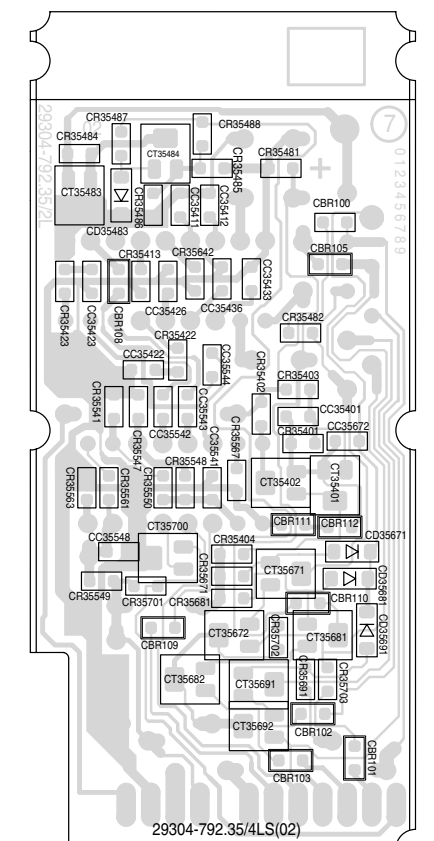
Bestückungsseite, Ansicht von oben / Component Side, Top View



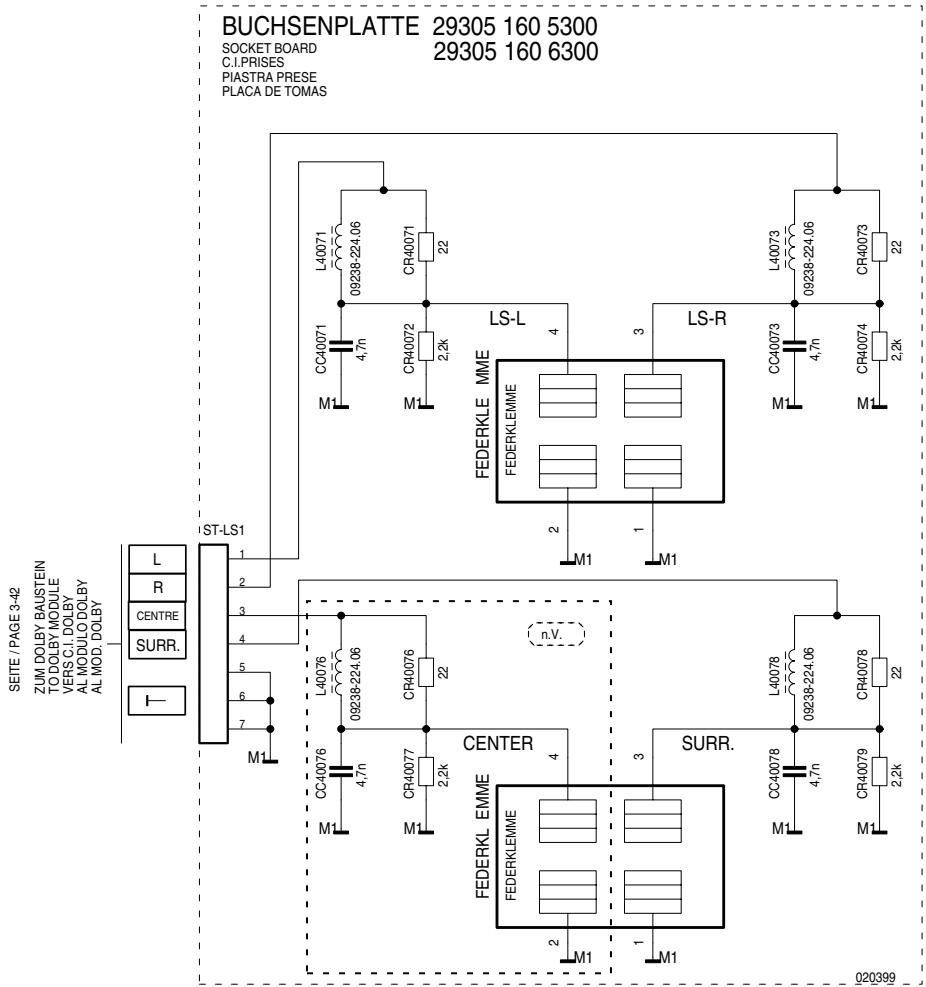
Bestückungsseite, Ansicht von oben
Component Side, Top View



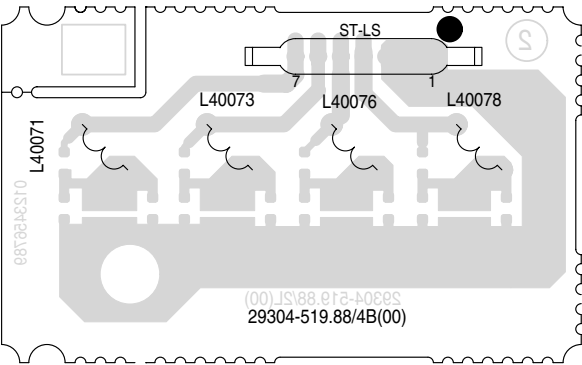
Lötseite, Ansicht von unten
Solder Side, Bottom View



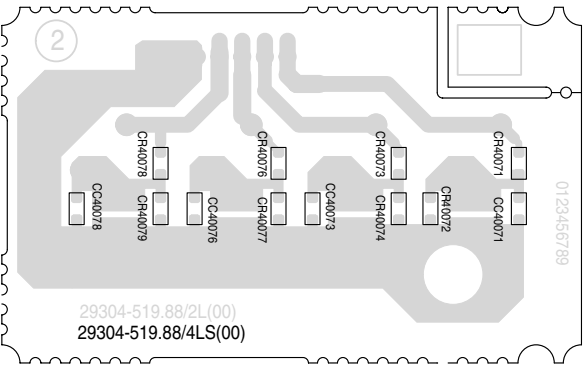
Buchsenplatte / Socket Board



Bestückungsseite, Ansicht von oben
Component Side, Top View

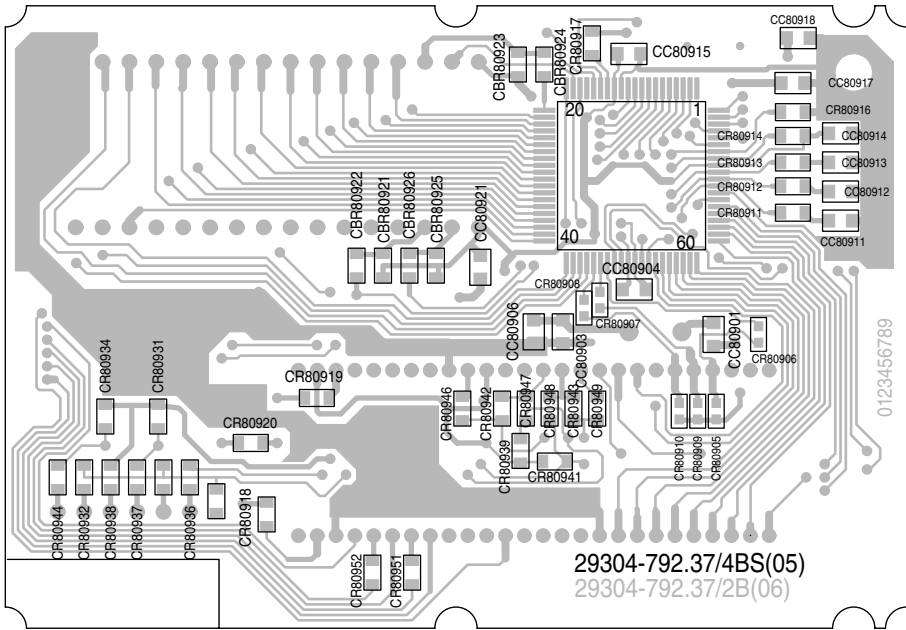
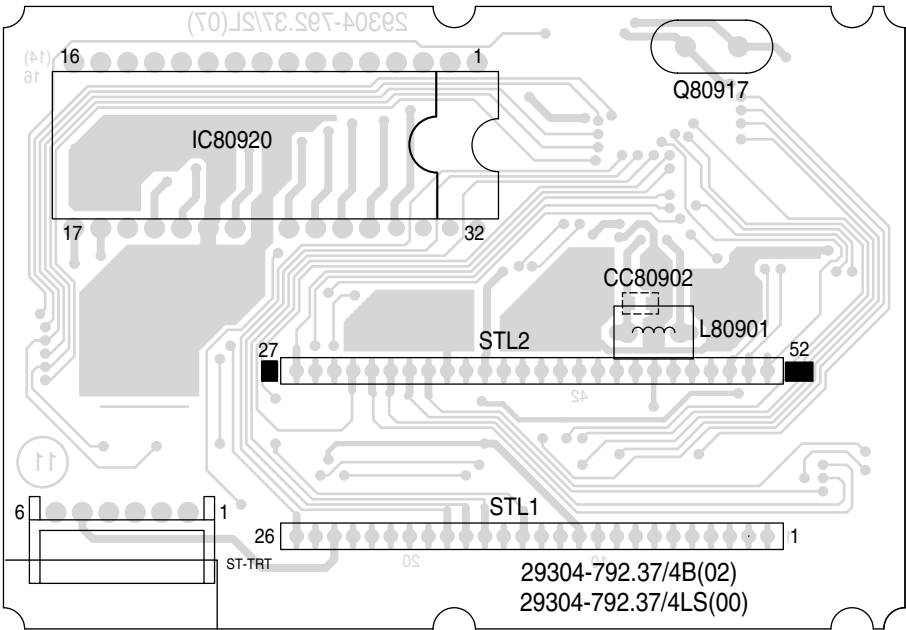


Lötseite, Ansicht von unten
Solder Side, Bottom View



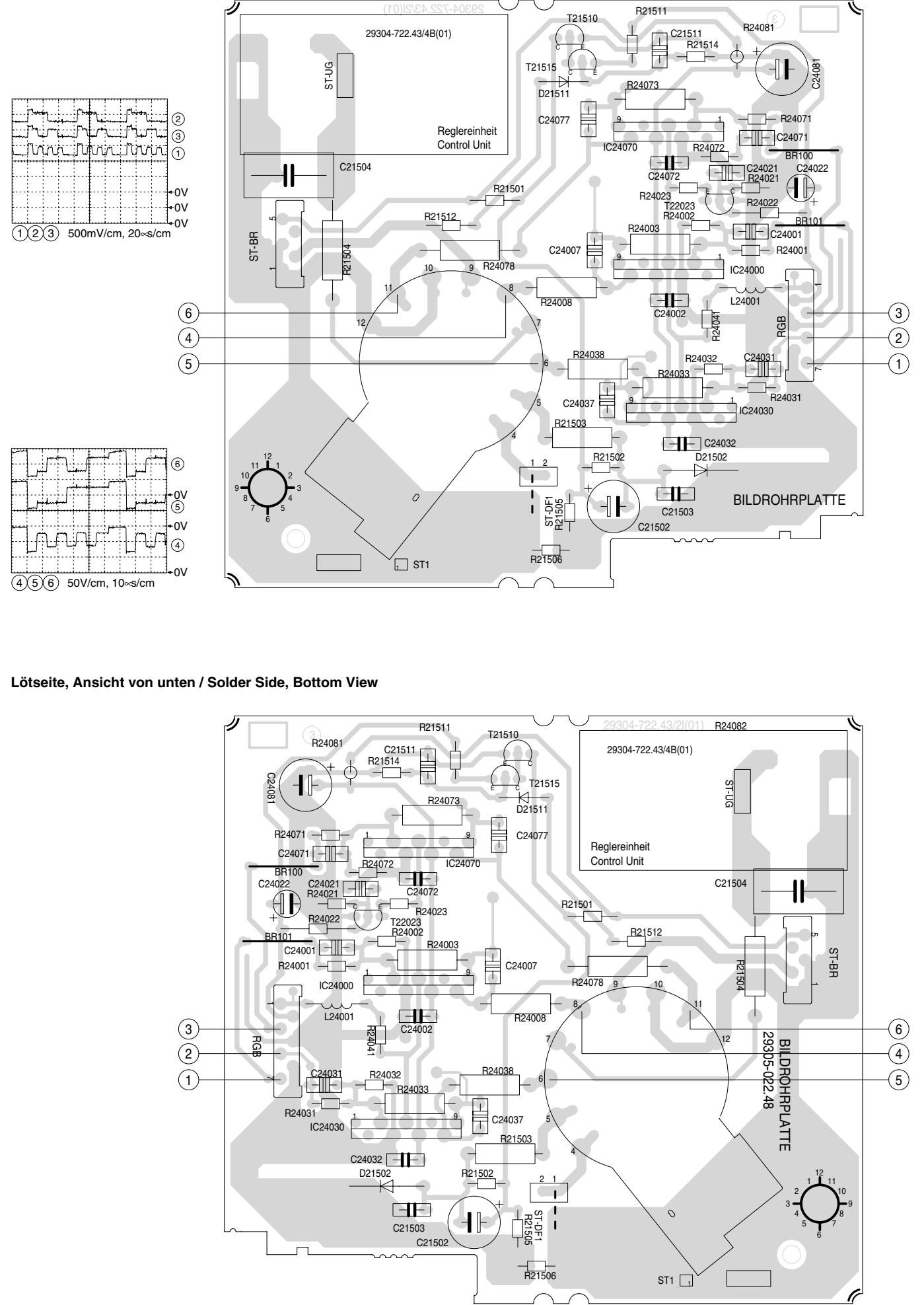
Prozessorplatte / Processor Board

Bestückungsseite, Ansicht von oben / Component Side, Top View

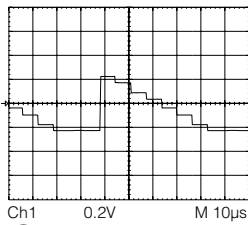
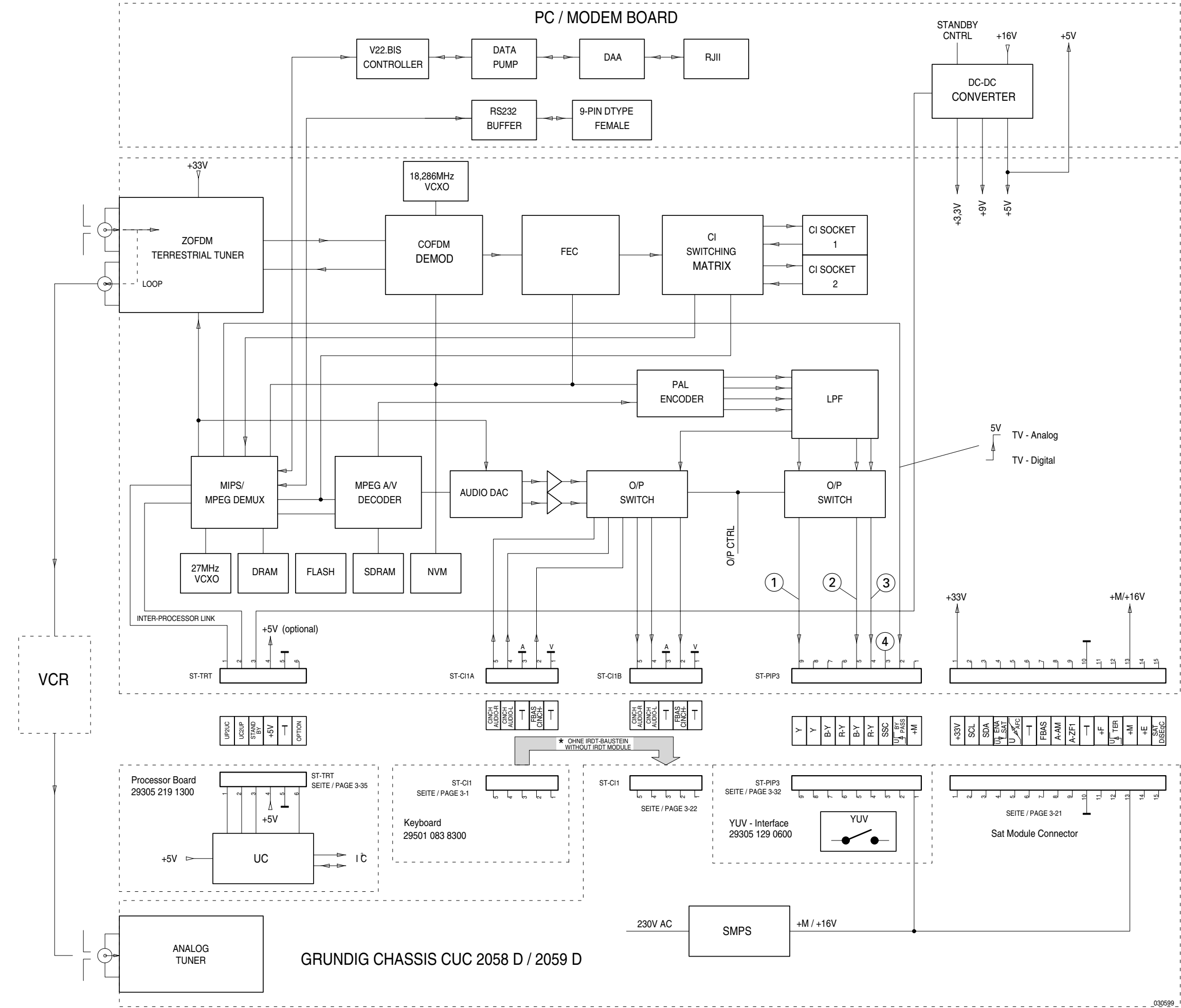




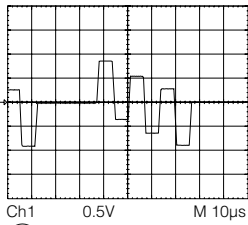
Bestückungsseite, Ansicht von oben / Component Side, Top View



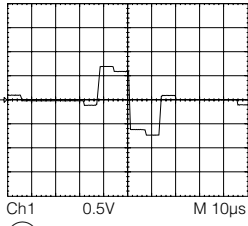
IRDT-Baustein / IRDT Module



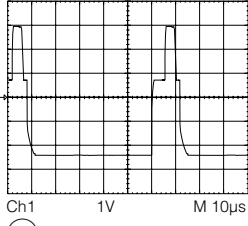
①



②



③



④

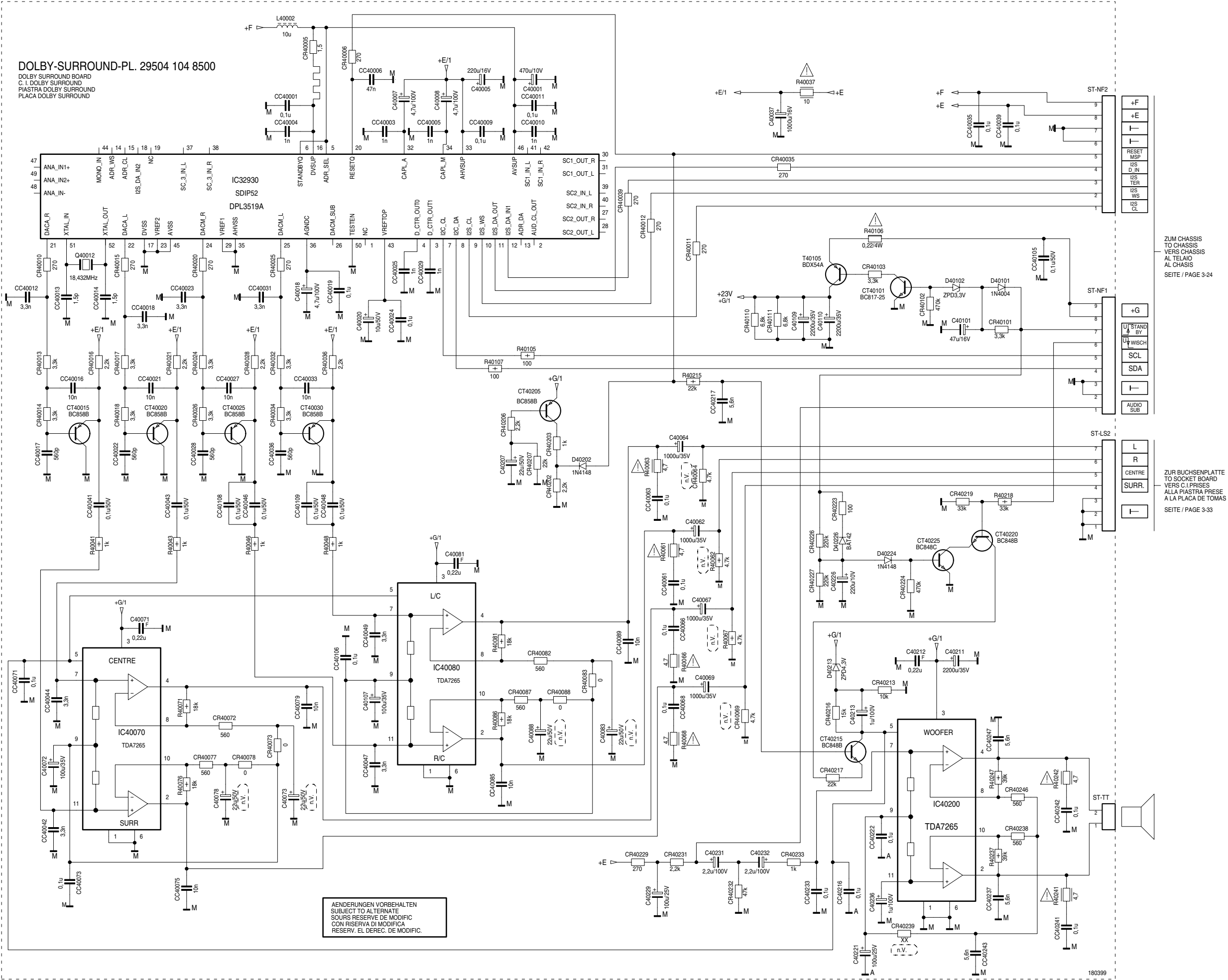
***Hinweis:**

Die Geräte mit IRDT-Baustein können auch ohne diesen Baustein betrieben werden. Die Steckverbindung ST-PIIP3 zur YUV-Interface muß gelöst werden. Um die Cinch-Eingänge auch ohne eingebauten IRDT-Baustein nutzen zu können, muß die Steckverbindung ST-CI1 auf dem Keyboard und die Steckverbindung ST-CI1 auf der Chassis-Platte verbunden werden.

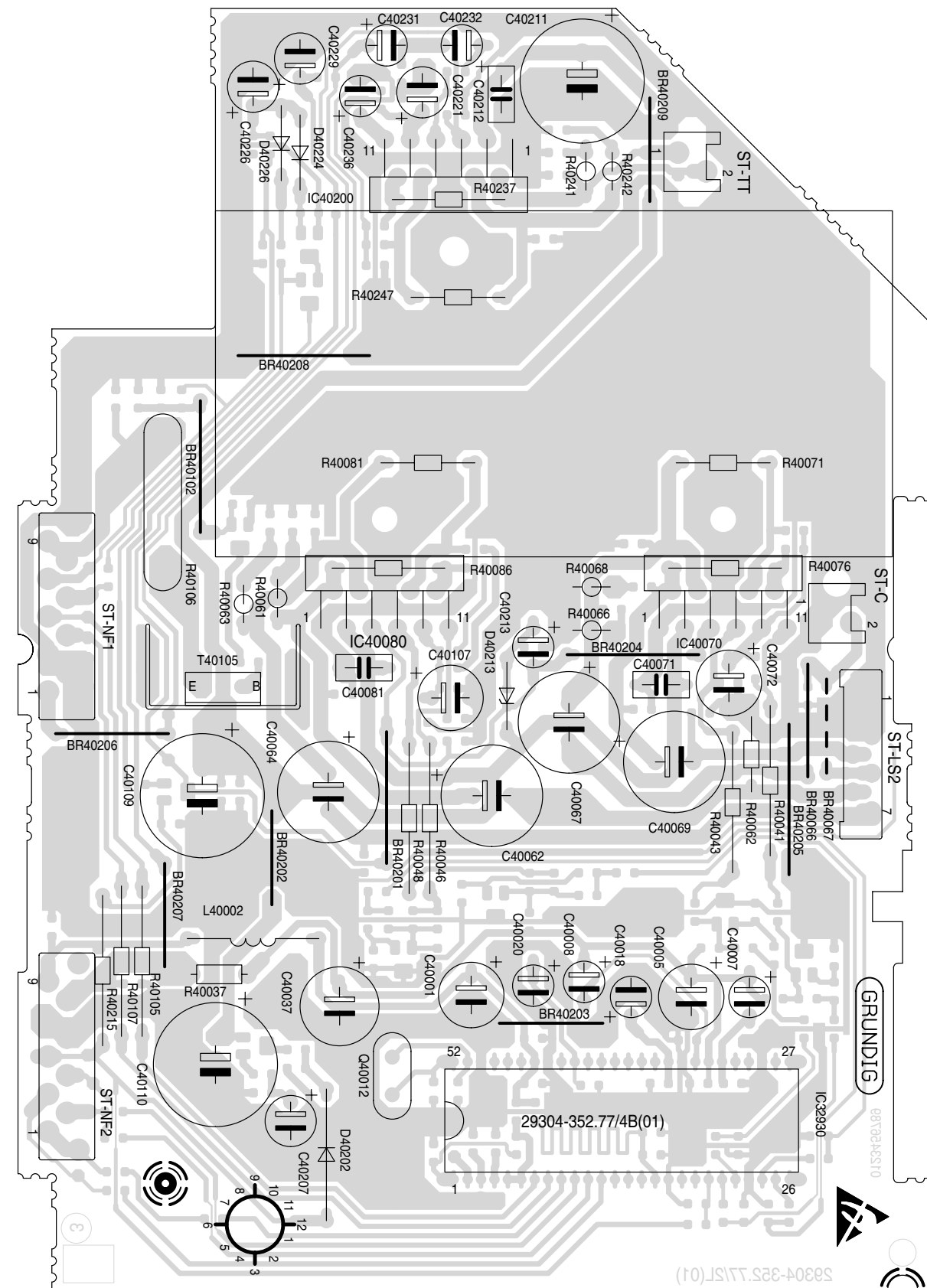
***Note:**

The TV receivers with IRDT Module can also be operated without this module. The connector ST-PIIP3 to the YUV interface must be detached. To make it possible to use the Cinch inputs also without the IRDT Module being built in, connect the connector ST-CI1 on the Keyboard and the connector ST-CI1 on the Chassis Board.

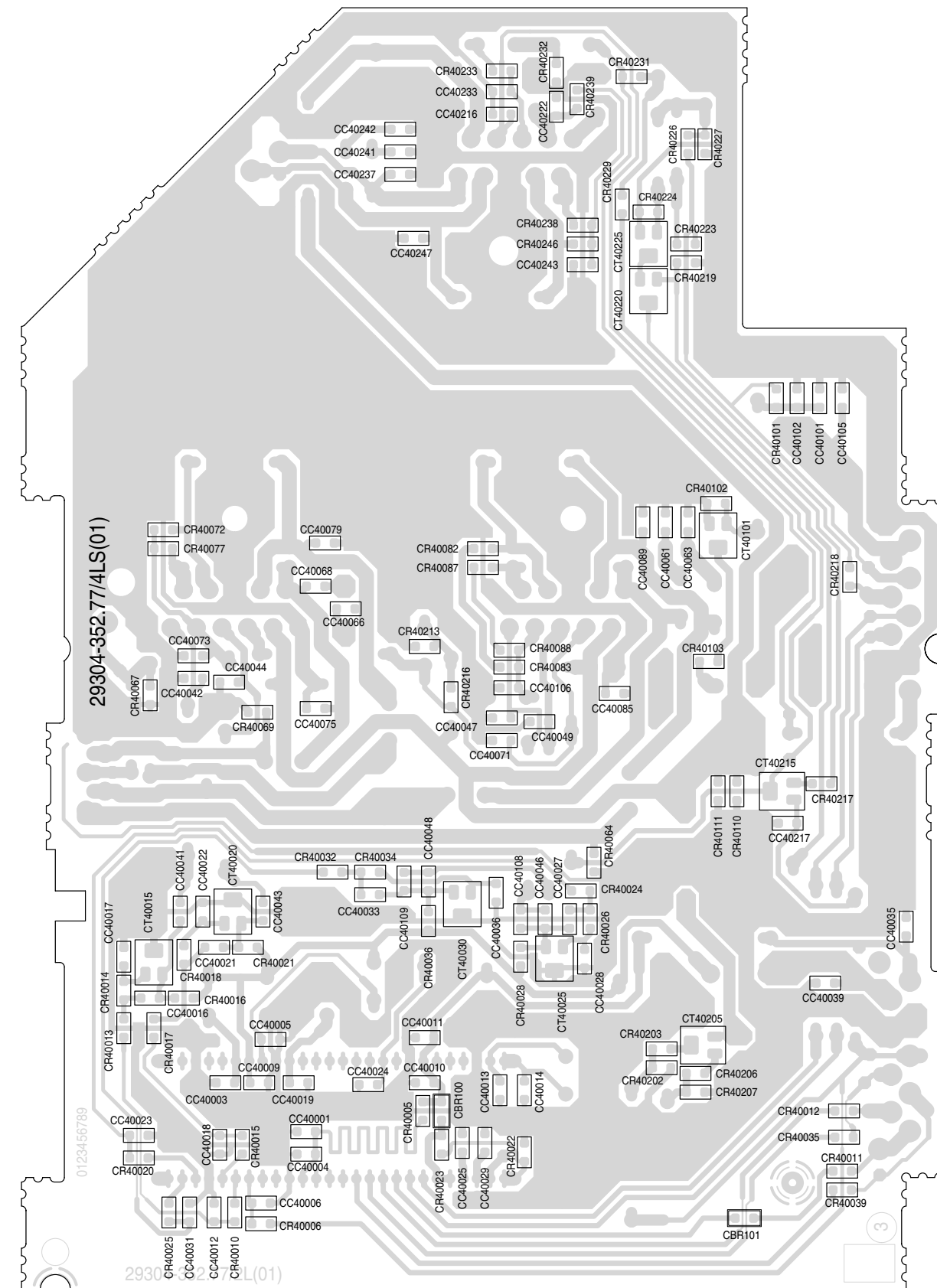
Dolby-Surround-Platte / Dolby Surround Board



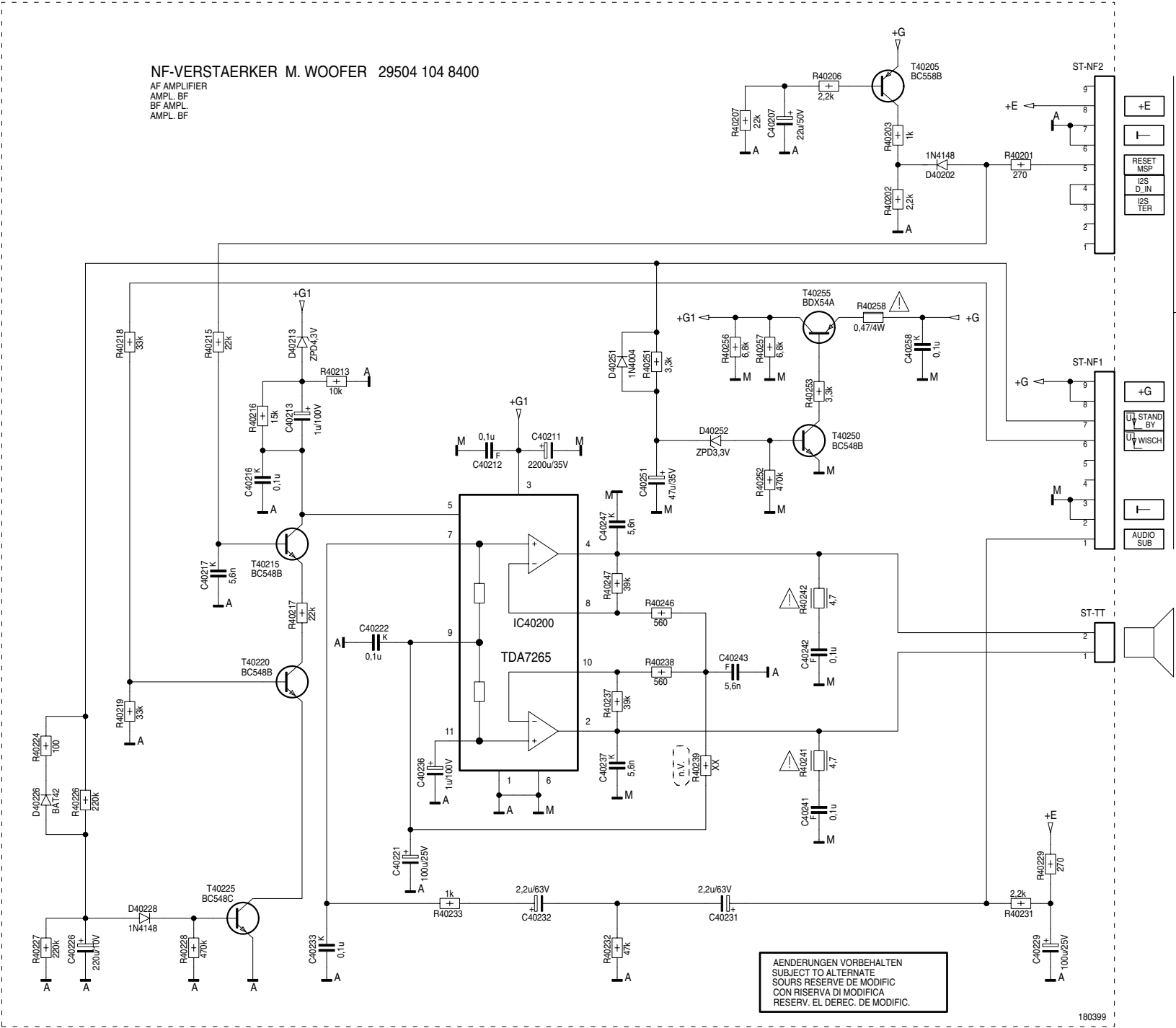
Bestückungsseite, Ansicht von oben / Component Side, Top View



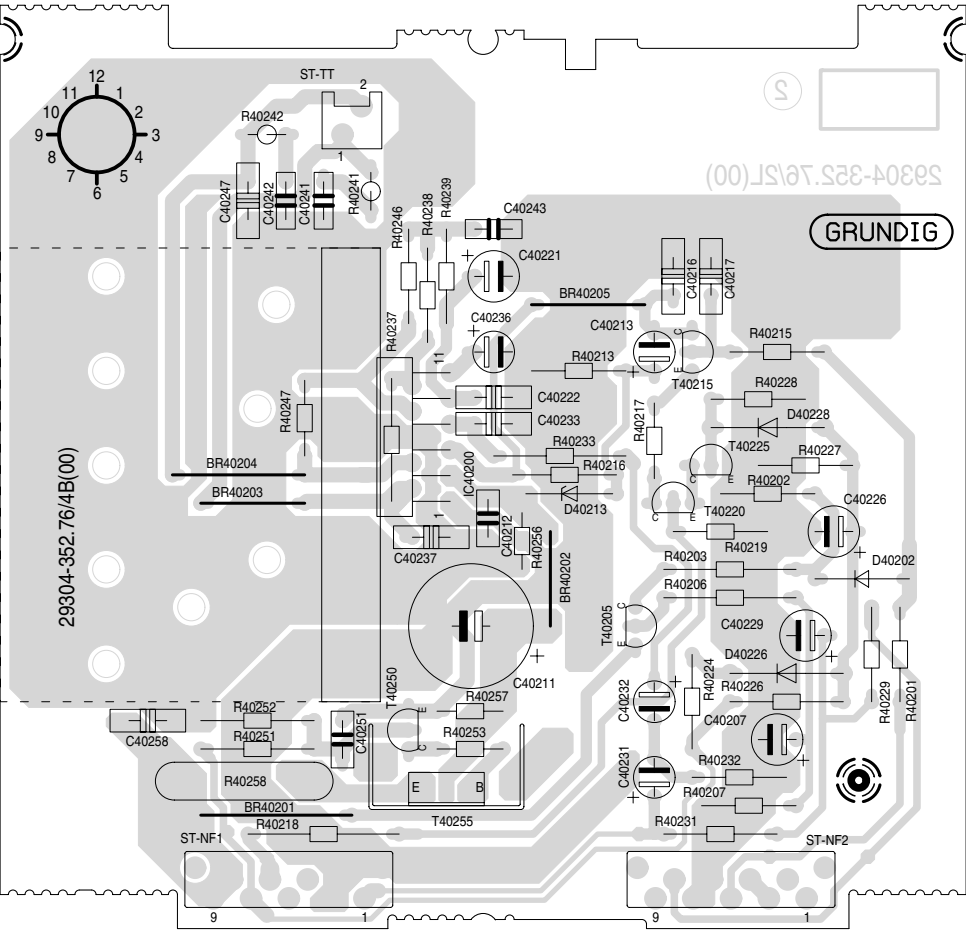
Lötseite, Ansicht von unten / Solder Side, Bottom View



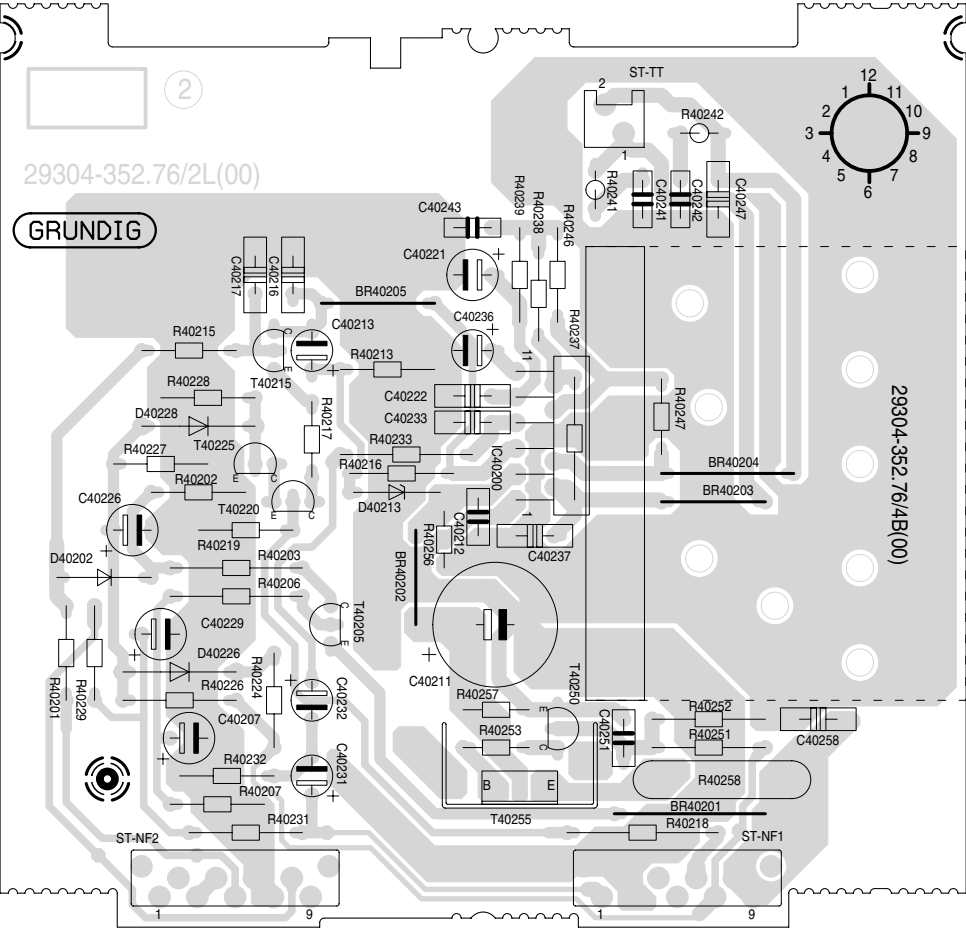
NF-Verstärker / AF Amplifier



Bestückungsseite, Ansicht von oben / Component Side, Top View



Lötseite, Ansicht von unten / Solder Side, Bottom View



GRUNDIG

Ersatzteilliste
Spare Parts List

TV

7 / 99

ARGANTO 70 MW 70-500 IRDT
ARGANTO 70 MW 70-505 IRDT/DPLVERSION NR./VERSION NO.: VNM
MATERIAL-NR. / PART NO.: 92182 863 5200 BESTELL-NR. / ORDER NO.: G.CI 39-52 GB POLAR
MATERIAL-NR. / PART NO.: 92182 864 5200 BESTELL-NR. / ORDER NO.: G.CI 40-52 GB POLAR

POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG (D)	DESCRIPTION (GB)
		92182 863 5200		ARGANTO 70 MW 70-500 IRDT KEIN E-TEIL	ARGANTO 70 MW 70-500 IRDT NO SPARE PART
		92182 864 5200		ARGANTO 70 MW 70-505 IRDT/DPL KEIN E-TEIL	ARGANTO 70 MW 70-505 IRDT/DPL NO SPARE PART
0200.000		29635 313 0101		GEH-VORDERTEIL DRUCK KPL	CABINET FRONT PART PRINT
0240.000		29636 327 0201		TASTENKNOPF	KEY POWER
0252.000		29303 390 4200		KOPFHOERERBUCHSE 3,5 O.SCHALTER	HEADPHONE SOCKET 3,5 W/O SWITCH
0253.000		29303 168 5800		CINCH-BUCHSE 3-FACH RT=SCHALTER/WS/GE	CINCH SOCKET 3 FOLD RD=SWITCH/WH/YE
0255.000		29636 328 0203		TASTENSATZ	KEY SET
0256.000		29501 599 0102		ABDECKUNG S-BUCHSEN	COVER S-SOCKETS
0257.000		29636 439 0602		KLAPPE DRUCK KPL	FLAP PRINT CPL
0257.000		29636 439 0702		KLAPPE DRUCK KPL	FLAP PRINT CPL
0258.000		27033 221 0100		DRUCKSCHNAPPER	PRESSURE CATCH
0259.000		29638 023 0101		DAEMPFUNGSBLOCK	DAMPING BLOCK
0259.000		29638 023 1301		DAEMPFUNGSBLOCK	DAMPING BLOCK
0260.000		29303 375 0101		DRAHTFEDER	WIRE SPRING
0264.000		19116 012 0200	2	LAUTSPRECHER	LOUDSPEAKER
0267.000		29608 864 0102	4	SOCKELEINLAGE	BASE INSERT
0269.000		29636 326 0202		IR-FENSTER	IR WINDOW
0279.000		29638 119 0101	2	SCHALLWAND	BAFFLE
0280.000		29638 138 0301	2	ABDECKUNG OFB	COVER SURFAC TREATED
0281.000		29636 504 0401		BEDIENUNGSEINSATZ DRUCK KPL	CONTROL INSERT PRINT CPL
0300.000		29636 319 0701		GEH-RUECKTEIL KPL OFB MIT SUBWOOFER	CABINET REAR PART CPL SUR WITH SUBWOOFER
0320.000		29618 823 0502		TYPENAUFKLEBER	TYPE LABEL SELF-ADH.
0320.000		29618 824 0502		TYPENAUFKLEBER	TYPE LABEL SELF-ADH.
0510.000		29636 324 0101		BOX-RUECKTEIL	BOX REAR PART
0520.000		29632 209 0202		GITTER KPL.	GRID CPL
0530.000		19124 024 6100		LAUTSPRECHER	LOUDSPEAKER
0700.000	△	09246 151 8500		ENTMAGNETISIERUNGSSPULE M.HALTER	DEGAUSSING COIL W.HOLDER
1100.000		83000 660 2300		BILDR.W66EGV023X015 VIDEOCOLOR	PICT.TUBE W66EGV023X015 VIDEOCOLOR
1110.000		09647 889 0100		ABGLEICHELEMENT MAGNETSCHEIBE	ALIGNMENT PART MAGNETIC WASHER
1200.000		29201 474 0100		ANODENKABEL M.HS-KONDENSATOR	ANODE CABLE WITH HS CONDENSER
1300.000		29501 083 8300		KEYBOARD KEIN E-TEIL	KEYBOARD NO SPARE PART
1310.000		29703 357 1100		TASTSCHALTER PROGRAMM +	KEY SWITCH PROGRAMME +
1320.000		29703 357 1100		TASTSCHALTER PROGRAMM -	KEY SWITCH PROGRAMME -
1330.000		29703 357 1100		TASTSCHALTER LAUTSTAERKE +	KEY SWITCH VOLUME +
1340.000		29703 357 1100		TASTSCHALTER LAUTSTAERKE -	KEY SWITCH VOLUME -
1360.000		29703 291 2205		NETZSCHALTER	POWER SWITCH
2100.000	△	82909 913 8600		NETZKABEL KPL GWN9.32 WF:	POWER CABLE CPL GWN9.32 W
2200.000		29305 160 6300		BUCHSENPLATTE CLICK FITG.CI 40-52 GB	SOCKET BOARD CLICK FIT G.CI 40-52 GB
2300.000		29305 122 2500	X	BILDROHRPLATTE	PICTURE TUBE BOARD
2400.000		29642 061 1400		FERNBEDIENUNG TP 815 C	REMONTE CONTROL TP 815 C
2450.000	△	29607 307 0102	2	SCHLAUFE	LOOP
2470.000		81049 001 7000		FERRIT SFC-8 KITAGAWA	SPLIT TOROIDAL CORES SFC-8 KITAGAWA
2480.000		81406 010 2000		SPERRFILTER SKF20	SUPPRESSION FILTER SKF20
		21828 941 0100		BEDIENUNGSANLEITUNG GB	GB OPERATING INSTRUCT. GB
		21828 941 0200		BEDIENUNGSANLEITUNG GB	G.CI40-52GB OPERATING INSTRUCT. GB G.CI 40-52 GB

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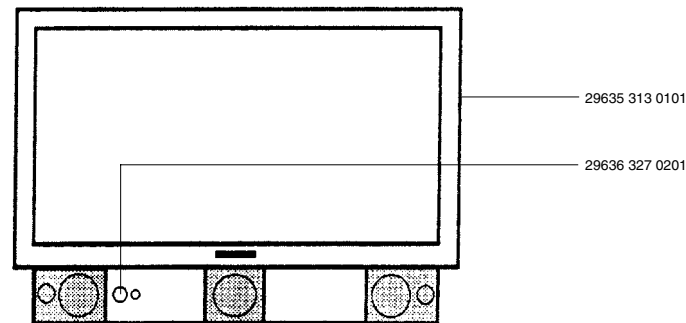
ÄNDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION

POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG (D)	DESCRIPTION (GB)
		72010 025 9000		SERVICE MANUAL D/GB	SERVICE MANUAL D/GB
		29656 004 2600		MONTAGEZUBEHOER FUER BILDROHR KEIN E-TEIL	MOUNTING ACCESSORIES F.CRT NO SPARE PART
		29704 003 8600	X	CHASSIS-FS-STEREO CUC 2059 D KEIN E-TEIL	CHASSIS TV STEREO CUC 2059 D NO SPARE PART
		29704 003 8700	X	CHASSIS-FS-STEREO CUC 2059 D KEIN E-TEIL	CHASSIS TV STEREO CUC 2059 D NO SPARE PART

X = SIEHE GESONDERTE E-LISTE

X = SEE SEPARATE PARTS LIST

POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION	POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
D 85001	83099 783 7100	LE-DIODE LUB371GK SIE/ LT			
D 85007	83092 150 4500	DIODE 1N4148			
IC 84001	83053 675 3000	IC TFMS5300 STEHEND/ TSOP			
T 44011	83032 055 4800	TRANS BC548B			
T 44013	83032 055 5800	TRANS BC558B			
T 85000	83032 055 5800	TRANS BC558B			
T 85005	83032 055 5800	TRANS BC558B			



Es gelten die Vorschriften und Sicherheitshinweise gemäß dem Service Manual "Sicherheit", Mat.-Nummer 72010 800 0000, sowie zusätzlich die eventuell abweichenden, landesspezifischen Vorschriften!



The regulations and safety instructions shall be valid as provided by the "Safety" Service Manual, part number 72010 800 0000, as well as the respective national deviations.

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ÄNDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION

Ersatzteilliste
Spare Parts List

TV

7 / 99

ARGANTO 82 MW 82- 500 IRDT
ARGANTO 82 MW 82- 505 IRDT/DPL

VERSION NR./VERSION NO.: VNM

MATERIAL-NR. / PART NO.: 92182 763 5200 BESTELL-NR. / ORDER NO.: G.CI 37-52 GB POLAR
MATERIAL-NR. / PART NO.: 92182 764 5200 BESTELL-NR. / ORDER NO.: G.CI 38-52 GB POLAR

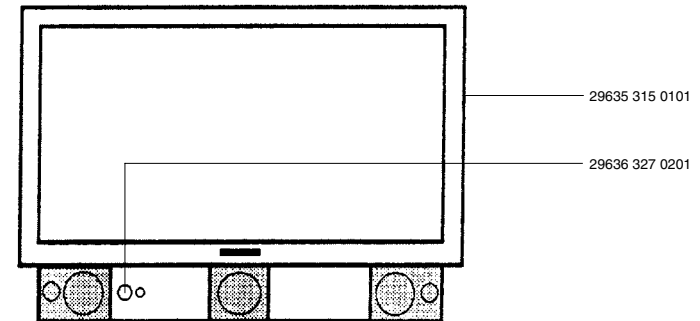
POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG (D)	DESCRIPTION (GB)
		92182 763 5200		ARGANTO 82 MW 82-500 IRDT POLAR KEIN E-TEIL	ARGANTO 82 MW 82-500 IRDT POLAR NO SPARE PART
		92182 764 5200		ARGANTO 82 MW 82-505 IRDT/DPL POLAR KEIN E-TEIL	ARGANTO 82 MW 82-505 IRDT/DPL POLAR NO SPARE PART
0200.000		29635 315 0101		GEH-VORDERTEIL DRUCK KPL	CABINET FRONT PART PRINT
0240.000		29636 327 0201		TASTENKNOPF	KEY POWER
0252.000		29303 390 4200		KOPFHÖRERBUCHSE 3,5 O.SCHALTER	HEADPHONE SOCKET 3,5 W/O SWITCH
0253.000		29303 168 5800		CINCH-BUCHSE 3-FACH RT=SCHALTERWS/GE	CINCH SOCKET 3 FOLD RD=SWITCH/WHY/E
0255.000		29636 328 0203		TASTENSATZ	KEY SET
0256.000		29501 599 0102		ABDECKUNG S-BUCHSEN	COVER S-SOCKETS
0257.000		29636 439 0502		KLAPPE DRUCK KPL G.CI 37-52 GB	FLAP PRINT CPL G.CI 37-52 GB
0257.000		29636 439 0802		KLAPPE DRUCK KPL G.CI 38-52 GB	FLAP PRINT CPL G.CI 38-52 GB
0258.000		27033 221 0100		DRUCKSCHNAPPER	PRESSURE CATCH
0259.000		29638 023 1301		DAEMPFBLOCK	DAMPING BLOCK
0260.000		29303 375 0101		DRAHTFEDER	WIRE SPRING
0264.000		19116 012 0200	2	LAUTSPRECHER	LOUDSPEAKER
0267.000		29608 864 0102	5	SOCKELEINLAGE	BASE INSERT
0269.000		29636 326 0202		IR-FENSTER	IR WINDOW
0279.000		29638 119 0101	2	SCHALLWAND	BAFFLE
0281.000		29636 504 0301		BEDIENUNGSEINSATZ DRUCK KPL.	CONTROL INSERT PRINT CPL
0300.000		29636 319 0601		GEH-RUECKTEIL KPL OFB MIT SUBWOOFER	REAR PANEL CPL SURF.TREAT WITH SUBWOOFER
0320.000		29618 821 0502		TYPENAUFKLEBER G.CI 37-52 GB	TYPE LABEL SELF-ADH. G.CI 37-52 GB
0320.000		29618 822 0502		TYPENAUFKLEBER G.CI 38-52 GB	TYPE LABEL SELF-ADH. G.CI 38-52 GB
0510.000		29636 324 0101		BOX-RUECKTEIL G.CI 38-52 GB	BOX REAR PART G.CI 38-52 GB
0520.000		29632 209 0202		GITTER KPL G.CI 38-52 GB	GRID CPL G.CI 38-52 GB
0530.000		19124 024 6100		LAUTSPRECHER G.CI 38-52 GB	LOUDSPEAKER G.CI 38-52 GB
0700.000	△	09246 152 8504		ENTMAGNETISIERUNGSSPULE M.HALTER	DEGAUSSING COIL W.HOLDER
1100.000		83000 760 2300		BILDR.W76EGV023X015 VIDEOCOLOR	PICT.TUBE W76EGV023X015 VIDEOCOLOR
1110.000		09647 889 0100		ABGLEICHELEMENT MAGNETSCHEIBE	ALIGNMENT PART MAGNETIC WASHER
1200.000		29201 474 0100		ANODENKABEL M.HS-KONDENSATOR	ANODE CABLE WITH HS CONDENSER
1300.000		29501 083 8300		KEYBOARD KEIN E-TEIL	KEYBOARD NO SPARE PART
1310.000		29703 357 1100		TASTSCHALTER PROGRAMM +	KEY SWITCH PROGRAMME +
1320.000		29703 357 1100		TASTSCHALTER PROGRAMM -	KEY SWITCH PROGRAMME -
1330.000		29703 357 1100		TASTSCHALTER LAUTSTAERKE +	KEY SWITCH VOLUME +
1340.000		29703 357 1100		TASTSCHALTER LAUTSTAERKE -	KEY SWITCH VOLUME -
1360.000		29703 291 2205		NETZSCHALTER	POWER SWITCH
2100.000	△	82909 913 8600		NETZKABEL KPL GWN9.32 WF:	POWER CABLE CPL GWN9.32 W
2200.000		29305 160 6300		BUCHSENPLATTE CLICK FIT G.CI 38-52 GB	SOCKET BOARD CLICK FIT G.CI 38-52 GB
2300.000		29305 122 2500	X	BILDROHRPLATTE	PICTURE TUBE BOARD
2400.000		29642 061 1400		FERNBEDIENUNG TP 815 C	REMOTE CONTROL TP 815 C
2450.000	△	29607 307 0102	2	SCHLAUFE	LOOP
2470.000		81049 001 7000		FERRIT SFC-8 KITAGAWA	SPLITTOROIDAL CORES SFC-8 KITAGAWA
2480.000		81406 010 2000		SPERRFILTER SKF20	SUPPRESSION FILTER SKF20
		21827 941 0100		BEDIENUNGSANLEITUNG GB G.CI 37-52 GB	OPERATING INSTRUCT. GB G.CI 37-52 GB
		21827 941 0200		BEDIENUNGSANLEITUNG GB G.CI 38-52 GB	OPERATING INSTRUCT. GB G.CI 38-52 GB
		72010 025 9000		SERVICE MANUAL D/GB	SERVICE MANUAL D/GB
		29656 004 2700		MONTAGEZUBEHOER FUER BILDROHR KEIN E-TEIL	MOUNTING ACCESSORIES F.CRT NO SPARE PART

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ÄNDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION

POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG (D)	DESCRIPTION (GB)
		29704 003 8800	X	CHASSIS-FS-STEREO CUC 2058 D KEIN E-TEIL	G.CI 37-52 GB CHASSIS TV STEREO CUC 2058 D NO SPARE PART
		29704 003 8900	X	CHASSIS-FS-STEREO CUC 2058 D KEIN E-TEIL	G.CI 38-52 GB CHASSIS TV STEREO CUC 2058 D NO SPARE PART
				X = SIEHE GESONDERTE E-LISTE	X = SEE SEPARATE PARTS LIST

POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
D 85001	83099 783 7100	LE-DIODE LUB371GK SIE/ LT
D 85007	83092 150 4500	DIODE 1N4148
IC 84001	83053 675 3000	IC TFMS5300 STEHEND/ TSOP
T 44011	83032 055 4800	TRANS BC548B
T 44013	83032 055 5800	TRANS BC558B
T 85000	83032 055 5800	TRANS BC558B
T 85005	83032 055 5800	TRANS BC558B



Es gelten die Vorschriften und Sicherheitshinweise gemäß dem Service Manual "Sicherheit", Mat.-Nummer 72010 800 0000, sowie zusätzlich die eventuell abweichenden, landesspezifischen Vorschriften!

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The regulations and safety instructions shall be valid as provided by the "Safety" Service Manual, part number 72010 800 0000, as well as the respective national deviations.

ÄNDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION

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Ersatzteilliste
Spare Parts List

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CHASSIS-FS-STEREO CUC 2058 D 16:9
CHASSIS-FS-STEREO CUC 2059 D 16:9MATERIAL-NR. / PART NO.: 29704 003 8800/8900 (CUC2058D)
MATERIAL-NR. / PART NO.: 29704 003 8600/8700 (CUC2059D)

POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG (D)	DESCRIPTION (GB)
		29704 003 8800		CHASSIS-FS-STEREO CUC2058D 16:9 KEIN E-TEIL	CHASSIS TV STEREO CUC2058D 16:9 NO SPARE PART
		29704 003 8900		CHASSIS-FS-STEREO CUC2058D 16:9 KEIN E-TEIL	CHASSIS TV STEREO CUC2058D 16:9 NO SPARE PART
		29704 003 8600		CHASSIS-FS-STEREO CUC2059D 16:9 KEIN E-TEIL	CHASSIS TV STEREO CUC2059D 16:9 NO SPARE PART
		29704 003 8700		CHASSIS-FS-STEREO CUC2059D 16:9 KEIN E-TEIL	CHASSIS TV STEREO CUC2059D 16:9 NO SPARE PART
0100.000		29504 301 0100		TUNER-GLOBAL (PLL)	TUNER-GLOBAL (PLL)
0255.000		29303 119 6600	2	EURO-AV BUCHSENLEISTE 21-POL	EURO-AV SOCKET STRIP 21 P
0268.000		29700 639 1101		HALTER BAUSTEIN	HOLDER MODULE
0500.000		29305 129 0400	X	PANORAMA VIEW	PANORAMA VIEW
0600.000		29504 207 0100		IRDIT/FTA-MODUL	IRDIT/FTA-MODUL
0700.000		29504 104 8400	X	BAUSTEIN SUBWOOFER	MODULE SUBWOOFER
0800.000		29504 104 8500	X	BAUSTEIN DOLBY	MODULE DOLBY
0900.000		29305 129 0600	X	INTERFACE Y-UV PLATTE	INTERFACE Y-UV BOARD
1000.000	△	09621 113 0206	4	SICHERUNGSHALTER	FUSE HOLDER
2400.000		29303 399 5100		NETZ EINBAUGERÄTESTECKER	APPLIANCE COUPLER W.CABLE
2410.000		29303 153 0107	2	MONTAGECLIP IC50020/T60006	MOUNTING CLIP IC50020/T60006
2420.000		29303 153 0200		MONTAGECLIP IC40000	MOUNTING CLIP IC40000
2430.000		29303 153 0208		MONTAGECLIP T53001	MOUNTING CLIP T53001
2440.000		29303 153 1208	3	MONTAGECLIP IC61040/61050/61060	MOUNTING CLIP IC61040/61050/61060
2450.000		29303 153 1605		MONTAGECLIP T55002	MOUNTING CLIP T55002
2470.000		29303 156 1801		FOLIE WÄRMELEITEND T60006	FOIL HEAT CONDUCTING T60006
2480.000		29303 156 2000	2	FOLIE WÄRMELEITEND IC61040/61050	FOIL HEAT CONDUCTING IC61040/61050

X = SIEHE GESONDERTE E-LISTE

X = SEE SEPARATE PARTS LIST

POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION	POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
C 40012	84529 961 5000	ELKO 2200UF 20% 25V CB 8600/8700	C 61026	86500 670 4600	HV-KERKO 100PF 20% 1KV
C 40062	84529 961 8700	ELKO 1000UF 20% 35V CB	C 61036	86500 670 4600	HV-KERKO 100PF 20% 1KV
C 40064	84529 961 8700	ELKO 1000UF 20% 35V CB	C 61037	84520 970 5700	ELKO 28 1000UF 63V
C 40067	84529 961 8700	ELKO 1000UF 20% 35V CB	C 61056	86500 670 4600	HV-KERKO 100PF 20% 1KV
C 40069	84529 961 8700	ELKO 1000UF 20% 35V CB	C 62021	△ 86600 982 3400	SI-KERKO B-SS 1000PF 20%
C 53002	85159 117 0600	FOKO FKP1/4 0,0155UF 3,5%	C 62022	△ 86600 982 3400	SI-KERKO B-SS 1000PF 20%
C 53009	85159 116 0200	FOKO FKP1 142PF 2,5% 2000V	C 62048	△ 86600 982 3400	SI-KERKO B-SS 1000PF 20%
C 53072	85159 114 1300	FOKO FKP1 0,016UF 5% 400V	C 62501	△ 85117 930 1800	MP3 0,1UF 20% 250VW WIM/P
C 54002	86500 670 4600	HV-KERKO 100PF 20% 1KV	C 62502	△ 85117 930 1800	MP3 0,1UF 20% 250VW WIM/P
C 54011	86500 670 4600	HV-KERKO 100PF 20% 1KV	C 62505	△ 85637 324 2500	FOKO KF #25 0,1UF 20% 250V
C 54012	84529 961 5500	ELKO 4700UF 20% 25V CB	CD 32411	83094 015 9200	SMD DIODE BA592 SIE/ BA78
C 60001	86500 811 2500	HV-KERKO 1000PF 20% 1KV	CD 32421	83094 015 9200	SMD DIODE BA592 SIE/ BA78
C 60002	85552 690 3500	FOKO KT/MKT 6 2700PF 5% 400V	CD 80007	83094 015 9200	SMD DIODE BA592 SIE/ BA78
C 60009	85159 116 0500	FOKO FKP1 220PF 5% 2000V	CIC32410	83058 140 9400	SMD IC MC14094BD
C 60023	86500 811 2500	HV-KERKO 1000PF 20% 1KV	CIC43050	83058 145 5100	SMD IC MC14551BD/R2 MOT A
C 60024	86500 811 2500	HV-KERKO 1000PF 20% 1KV			
C 60026	86500 811 2500	HV-KERKO 1000PF 20% 1KV			
C 60027	86500 811 2500	HV-KERKO 1000PF 20% 1KV			
C 60038	85552 690 3700	FOKO KT/MKT 6 3300PF 5% 400V	CT 31005	83010 038 5800	SMD TRANS BC858B
C 61016	85159 110 3800	FOKO FKP1 100PF 10% 1600V	CT 32105	83010 058 1700	SMD-TRANS.BC 817-25
			CT 32111	83010 048 4800	SMD-TRANS.BC848B

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ÄNDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION

POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION	POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
CT 32119	83010 048 4800	SMD-TRANS.BC848B	D 61036	83098 208 4000	DIODE MUR 840/BYV 29-400/
CT 32122	83010 038 5800	SMD TRANS BC858B	D 61056	△ 83095 171 7200	DIODE BYW172D TEMIC/ FUF5
CT 32123	83010 048 4800	SMD-TRANS.BC848B	D 81020	83092 150 4500	DIODE 1N4148
CT 32124	83010 038 5800	SMD TRANS BC858B			
CT 32132	83010 048 4800	SMD-TRANS.BC848B	F 32101	81411 124 0500	FILTER 7X7 405 SIGN 11240
CT 32308	83010 038 5800	SMD TRANS BC858B	F 32109	86027 550 4200	CER.TRAP 42
CT 32310	83010 038 5800	SMD TRANS BC858B	F 32121	81411 113 6000	FILTER 7X7 360 SIGN 11136
CT 32312	83010 038 5800	SMD TRANS BC858B	F 32410	81411 076 0000	SPULE 7X7 #600 FARBE342 3
CT 32315	83010 038 5800	SMD TRANS BC858B	F 32412	83190 034 5200	OFWFL K3453K/ K3452K S
CT 32318	83010 038 5800	SMD TRANS BC858B			
CT 32415	83010 048 4800	SMD-TRANS.BC848B	IC 32000	83054 334 1100	IC MSP3410D-PO-B4
CT 32430	83010 048 4800	SMD-TRANS.BC848B	IC 32930	83051 474 1900	IC DPL3519A-PO-A2 DIP 52 8900
CT 32431	83010 048 4800	SMD-TRANS.BC848B	IC 34015	83053 388 4300	IC TDA8843N2S1
CT 34031	83010 038 5800	SMD TRANS BC858B	IC 40000	83053 672 9700	IC TDA7297
CT 34075	83010 048 4800	SMD-TRANS.BC848B	IC 40070	83053 372 6500	IC TDA7265 SGS 8700/8900
CT 35484	83010 048 4800	SMD-TRANS.BC848B	IC 40080	83053 372 6500	IC TDA7265 SGS 8700/8900
CT 35671	83010 048 4800	SMD-TRANS.BC848B	IC 43280	83053 664 2500	IC TEA6425 SGS
CT 35681	83010 048 4800	SMD-TRANS.BC848B	IC 50020	83053 383 5000	IC TDA8350Q/N6
CT 35691	83010 048 4800	SMD-TRANS.BC848B	IC 60010	83053 546 0500	IC TDA4605/3
CT 40059	83010 048 4800	SMD-TRANS.BC848B	IC 61040	83052 043 1700	IC LM317T NSC/MOT/SGS
CT 41022	83010 068 0800	SMD-TRANS.BC 808-40	IC 61050	83052 043 1700	IC LM317T NSC/MOT/SGS
CT 41030	83010 068 0800	SMD-TRANS.BC 808-40	IC 61060	83052 057 0300	IC MC7805CT
CT 43095	83010 048 4800	SMD-TRANS.BC848B	IC 61310	83052 043 5700	IC LM358N NSC/TID/MOT/RAY
CT 43246	83010 048 4800	SMD-TRANS.BC848B	IC 80000	83052 100 6500	IC MC33164P-5RP
CT 43255	83010 048 4800	SMD-TRANS.BC848B	IC 81050	29325 219 1300	PROZESSORPLATTE
CT 43289	83010 038 5800	SMD TRANS BC858B	IC 82005	83051 240 0800	IC M24C08B1/ M24C08-BN6
CT 46004	83010 048 4800	SMD-TRANS.BC848B			
CT 46009	83010 048 4800	SMD-TRANS.BC848B	L 31043	81405 264 4000	DR ST 0411-GRP 8,2UH 10%
CT 52253	83010 038 5800	SMD TRANS BC858B	L 32023	81405 264 1900	DR AX 0411-GA 1UH 10%
CT 57005	83010 048 4800	SMD-TRANS.BC848B	L 32026	81405 260 3400	DR 0309 10UH 5%
CT 57020	83010 038 5800	SMD TRANS BC858B	L 32109	81405 264 4400	DR ST 0309-GRP 10UH 5%
CT 57021	83010 038 5800	SMD TRANS BC858B	L 32342	81405 052 4900	DR A AX-GA 10UH 10%
CT 57112	83010 038 5800	SMD TRANS BC858B	L 40002	81405 052 4900	DR A AX-GA 10UH 10%
CT 57113	83010 038 5800	SMD TRANS BC858B			8700/8900
CT 57124	83010 048 4800	SMD-TRANS.BC848B	L 43098	81405 117 4800	DR 0411 22UH 10%
CT 61043	83010 048 4800	SMD-TRANS.BC848B	L 46022	81405 264 5800	DR 0309 2,7UH 5%
CT 61053	83010 048 4800	SMD-TRANS.BC848B	L 53001	81049 820 5600	FERRITPERLE HF70 BTL 3,5X
CT 81058	83010 048 4800	SMD-TRANS.BC848B	L 53002	81049 820 5600	FERRITPERLE HF70 BTL 3,5X
CT 81091	83010 048 4800	SMD-TRANS.BC848B	L 53003	81049 820 5600	FERRITPERLE HF70 BTL 3,5X
CT 81508	83010 048 4800	SMD-TRANS.BC848B			FERRITE BEAD
CT 81511	83010 038 5800	SMD TRANS BC858B	L 53011	81405 052 4900	DR A AX-GA 10UH 10%
			L 53012	09240 110 5100	DROSSEL 2,2 MH/CHOKE COIL
			L 53021	29203 110 9500	LINEARITÄTSSREGLER (110)
					LINEARITY CONTROL
D 31001	83097 030 3300	Z-DIODE ZPY33 2%/ BZX85B3	L 53074	09246 846 5600	BRUECKENSPULE (110)
D 31007	83097 200 4800	Z DIODE 4,7 C 0,5W			BRIDGE COIL
D 40064	83092 150 4500	DIODE 1N4148	L 55006	09245 816 0100	O/W AUSKOPPELSPULE
D 40066	83092 150 4500	DIODE 1N4148			E/W DECOUPLING COIL
D 50011	83097 205 1000	Z DIODE 51 C 0,5W	L 60006	81049 820 5700	FERRITPERLE 3,6UH 5720500
D 50013	83092 150 2000	DIODE 1 N 4004 -GA			FERRITE BEAD
D 50014	83092 150 4500	DIODE 1N4148	L 60012	81049 820 1400	DAEMPF-PERLE 433003038102
D 52001	83092 150 4500	DIODE 1N4148	L 61016	81049 820 1400	DAEMPF-PERLE 433003038102
D 53003	83092 010 0500	DIODE BA157	L 61026	81049 820 1400	DAEMPF-PERLE 433003038102
D 53071	△ 83092 042 2800	DIODE BY228 PHI/GI/TFK	L 61036	81049 820 1400	DAEMPF-PERLE 433003038102
D 53072	△ 83092 101 4400	DIODE BYW76 TEMIC/ MR858	L 61056	81049 820 1400	DAEMPF-PERLE 433003038102
D 54001	△ 83092 042 6800	DIODE BYV16 TEMIC/ BYV96E			DAMPING BEAD
D 54002	83095 162 8300	DIODE BYV 28-200 RA 12,5/	L 62501	△ 29500 825 9700	ENTSTOER-DR/CHOKE COIL
D 54011	83095 162 8300	DIODE BYV 28-200 RA 12,5/	L 81062	81049 820 5100	FERRITPERLE HF55 BTL 3,5X
D 57011	83092 150 4500	DIODE 1N4148			FERRITE BEAD
D 57012	83092 150 4500	DIODE 1N4148			
D 57013	83092 150 4500	DIODE 1N4148	OK 60031	△ 83060 000 1200	OPTOKOPPLER CNY17F1/ CNY1
D 57014	83092 150 4500	DIODE 1N4148			
D 57023	83092 150 4500	DIODE 1N4148	Q 20093	83821 620 4100	QUARZ 4 MHZ LMG8-638 NDK
D 57101	83091 985 4200	DIODE BAT42/43/BAT85/86 A	Q 32305	83824 391 8600	QUARZ #439-9 18,432MHZ 12
D 57122	83092 150 4500	DIODE 1N4148	Q 34043	83821 360 0400	QUARZ #136 2A 4,433619MHZ
D 60005	83092 000 2100	DIODE BAV21 ITT/ TFK	Q 40012	83824 391 8600	QUARZ#439-9 18,432MHZ 12
D 60006	83095 168 5400	DIODE BYT 54 M GEG.N.AV 6			8700/8900
D 60007	83095 168 5400	DIODE BYT 54 M GEG.N.AV 6			
D 60012	83092 000 2100	DIODE BAV21 ITT/ TFK			
D 60023	83085 603 8400	GLR.SK380C1500/ FB12L52-	R 21117	△ 87053 690 1300	MOW 0617 3,3 OHM 5%
D 60037	83092 000 2100	DIODE BAV21 ITT/ TFK	R 32359	△ 87003 290 4700	KSW NB 0207 82 OHM 5%
D 61016	△ 83092 115 0800	DIODE SF5408 VIS			

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ÄNDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION

POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
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R 40012	△ 87322 960 1100	DRW 6,5 2,7 OHM 10%
R 40037	△ 87011 210 2500	KSW SI B 10 OHM 5% 8700/8900
R 40061	△ 87004 290 1700	KSW NB 0207 4,7 OHM 5% 8700/8900
R 40063	△ 87004 290 1700	KSW NB 0207 4,7 OHM 5% 8700/8900
R 40066	△ 87004 290 1700	KSW NB 0207 4,7 OHM 5% 8700/8900
R 40068	△ 87004 290 1700	KSW NB 0207 4,7 OHM 5% 8700/8900
R 40106	△ 87322 919 8600	DRW 4 0,27 OHM 10% 8700/8900
R 43098	△ 87011 190 2100	KSW SI B 6,8 OHM 5%
R 50011	△ 87011 210 3700	KSW SI B 33 OHM 5%
R 50021	△ 87663 274 0500	MSW 0207 1,5 OHM 1%
R 50022	△ 87663 272 0700	MSW 0207 1,8 OHM 2%
R 50024	△ 87663 570 5700	MSW 0414 220 OHM 5%
R 52004	△ 87053 290 3300	MOW 0411 27 OHM 5%
R 53001	△ 87004 290 2300	KSW NB 0207 8,2 OHM 5%
R 53002	△ 87004 290 9700	KSW NB 0207 10 KOHM 5%
R 53011	△ 87052 270 2100	MOW 0411 6,8 OHM 5%
R 53016	△ 87301 792 2100	DRW 7 6,8 OHM 10%
R 53021	△ 87053 290 7100	MOW 0411 820 OHM 5%
R 54001	△ 87053 290 2700	MOW 0411 12 OHM 5%
R 54003	△ 87003 290 0900	KSW NB 0207 2,2 OHM
R 54012	△ 87350 032 0100	DRW 0,75W 1 OHM 10%
R 55006	△ 87012 308 1700	NKS 3 4,7 OHM 5%
R 60008	△ 87053 691 0500	MOW 0617 22 KOHM 5%
R 60009	△ 87053 691 0500	MOW 0617 22 KOHM 5%
R 60016	△ 87053 690 4300	MOW 0617 56 OHM 5%
R 60021	△ 83110 050 1700	NTC 4,7 OHM 30%
R 60029	△ 87053 693 1900	MOW 0617 82 KOHM 10%
R 61019	△ 87001 213 3300	KSW 0207 330 KOHM 5%
R 61313	△ 87900 500 5400	ESTR.SK10-A 22 KOHM LIN
R 62049	△ 87663 491 6100	MSW SI 0414 4,7 MOHM 5%
R 62505	△ 83112 000 1200	PTC #3 DUO

SI 40012	△ 83156 190 2800	SI LOET T1,6A 250V
SI 40070	△ 83156 210 2700	SI LOET T2,5A 250V
SI 52001	△ 83156 120 2700	SI LOET T315MA 250V
SI 60001	△ 83156 190 0300	SI 5X20 T1,6A L 250V
SI 61026	△ 83156 230 0800	SI LOET T4A 250V
SI 61036	△ 83156 240 0100	SI LOET T 5A 250V
SI 61056	△ 83156 210 2700	SI LOET T2,5A 250V
SI 62501	△ 83156 170 0600	SI 5X20 T2,5A L 250V

T 40105	83022 170 9500	TRANS BDW94B STM 8700/8900
T 52001	83032 856 3700	TRANS.BC 637
T 53001	83029 000 1900	TRANS S2000N TOS
T 55002	83029 901 2000	TRANS STP10NB20FP SGS
T 60006	83028 050 5000	TRANS IRFPC50 IRF/ 2SK26
T 61301	83032 055 4800	TRANS BC548B

TR 52001	09246 866 0400	TRAFO TREIBER DRIVER TRANSFORMER
TR 53010	△ 29221 029 6300	TRAFO DIODEN-SPLIT (110) DIODE SPLIT TRANSFORMER
TR 61000	△ 29201 344 9701	TRAFO SPERRWANDLER B.O.-TYPE CONVERTER TRANSFORMER

Es gelten die Vorschriften und Sicherheitshinweise gemäß dem Service Manual "Sicherheit", Mat.-Nummer 72010 800 0000, sowie zusätzlich die eventuell abweichenden, landesspezifischen Vorschriften!

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The regulations and safety instructions shall be valid as provided by the "Safety" Service Manual, part number 72010 800 0000, as well as the respective national deviations.

ÄNDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION

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Ersatzteilliste
Spare Parts List

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BILDROHRPLATTE
PICTURE TUBE BOARD

MATERIAL-NR. / PART NO.: 29305 122 2500

POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG D	DESCRIPTION GB
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0010.000	△	29305 122 2500		BILDROHRPLATTE	PICTURE TUBE BOARD
0020.000	△	29303 752 9500		BILDROHRFASSUNG	CRT SOCKET
		29201 361 1800		FOKUS U.UG2-REGLER	FOCUS AND UG2-CONTROLLER

POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
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C 21504	85637 316 1200	KF 21 0,01 UF 20% 1500V
D 21502	83092 150 2000	DIODE 1 N 4004 -GA
L 24001	81405 260 2200	DR AX 0309-GA 22UH 5%
R 21502	87000 113 6100	KSW 0204 4,7 MOHM 5%
R 24021	87650 965 0200	MSW 0204 16 KOHM 1%
R 24081	△ 87004 290 4700	KSW NB 0207 82 OHM 5%
T 21510	83034 012 9900	TRANS.BF299 G ITT/PBF259
T 21515	83032 055 5800	TRANS BC558B
T 22023	83032 035 5800	TRANS BC558A

POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
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Es gelten die Vorschriften und Sicherheitshinweise gemäß dem Service Manual "Sicherheit", Mat.-Nummer 72010 800 0000, sowie zusätzlich die eventuell abweichenden, landesspezifischen Vorschriften!

Btx *32700#



The regulations and safety instructions shall be valid as provided by the "Safety" Service Manual, part number 72010 800 0000, as well as the respective national deviations.

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Spare Parts List

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INTERFACE Y-UV PLATTE
INTERFACE Y-UV BOARD

MATERIAL-NR. / PART NO.: 29305 129 0600

POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG (D)	DESCRIPTION (GB)
		29305 129 0600		INTERFACE Y-UV PLATTE	INTERFACE Y-UV BOARD

POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
CD 35483	83250 041 4800	SMD DIODE LS 4148
CD 35671	83250 041 4800	SMD DIODE LS 4148
CD 35681	83250 041 4800	SMD DIODE LS 4148
CD 35691	83250 041 4800	SMD DIODE LS 4148
CT 35483	83010 038 5800	SMD TRANS BC858B
CT 35484	83010 048 4800	SMD-TRANS.BC 848 B
CT 35671	83010 048 4800	SMD-TRANS.BC 848 B
CT 35672	83010 038 5800	SMD TRANS BC858B
CT 35681	83010 048 4800	SMD-TRANS.BC 848 B
CT 35682	83010 038 5800	SMD TRANS BC858B
CT 35691	83010 048 4800	SMD-TRANS.BC 848 B
CT 35692	83010 038 5800	SMD TRANS BC858B
CT 35700	83010 038 5800	SMD TRANS BC858B

Es gelten die Vorschriften und Sicherheitshinweise gemäß dem Service Manual "Sicherheit", Mat.-Nummer 72010 800 0000, sowie zusätzlich die eventuell abweichenden, landesspezifischen Vorschriften!



The regulations and safety instructions shall be valid as provided by the "Safety" Service Manual, part number 72010 800 0000, as well as the respective national deviations.

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ÄNDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION

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Ersatzteilliste
Spare Parts List

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PANORAMA VIEW

MATERIAL-NR. / PART NO.: 29305 129 0400

POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG (D)	DESCRIPTION (GB)
		29305 129 0400		PANORAMA VIEW	PANORAMA VIEW

POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
OK 64103	83060 000 1200	OPTOKOPPLER CNY17F1/ CNY1
T 05008	83029 907 2000	TRANS STP10NB20/ STP7N20
T 64101	83032 055 4800	TRANS BC548B

Es gelten die Vorschriften und Sicherheitshinweise gemäß dem Service Manual "Sicherheit", Mat.-Nummer 72010 800 0000, sowie zusätzlich die eventuell abweichenden, landesspezifischen Vorschriften!



The regulations and safety instructions shall be valid as provided by the "Safety" Service Manual, part number 72010 800 0000, as well as the respective national deviations.

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ÄNDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION

Ersatzteilliste
Spare Parts List

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BAUSTEIN SUBWOOFER
MODULE SUBWOOFER

MATERIAL-NR. / PART NO.: 29504 104 8400

POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG (D)	DESCRIPTION (GB)
		29504 104 8400		BAUSTEIN SUBWOOFER	MODULE SUBWOOFER
2410.000		29303 156 3101		FOLIE WAERMELEITEND IC40200	FOIL HEAT CONDUCTING IC40200

POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
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D 40213	83097 200 4300	Z DIODE 4,3 C 0,5W
D 40225	83092 150 4500	DIODE 1N4148
D 40226	83091 985 4200	DIODE BAT42/43/BAT85/86 A
IC 40200	83053 372 6500	IC TDA7265 SGS
R 40241	⚠ 87004 290 1700	KSW NB 0207 4,7 OHM 5%
R 40242	⚠ 87004 290 1700	KSW NB 0207 4,7 OHM 5%
R 40258	⚠ 87322 919 9600	DRW 4 0,68 OHM 10%
T 40215	83032 055 4800	TRANS BC548B
T 40220	83032 055 4800	TRANS BC548B
T 40225	83032 055 4800	TRANS BC548B
T 40250	83032 055 4800	TRANS BC548B
T 40255	83022 180 5400	TRANS.BDX 54 A/B/C

POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
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ÄNDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION

Ersatzteilliste
Spare Parts List

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BAUSTEIN DOLBY
MODULE DOLBY

MATERIAL-NR. / PART NO.: 29504 104 8500

POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG (D)	DESCRIPTION (GB)
		29504 104 8500		BAUSTEIN DOLBY	MODULE DOLBY
1310.000		29303 156 3101	3	FOLIE WAERMELEITEND IC40070/40080/40200	FOIL HEAT CONDUCTING IC40070/40080/40200

POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
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C 40037	84151 661 0600	ELKO 1000UF 20% 16V
C 40109	84529 961 9000	ELKO 2200UF 20% 35V
C 40110	84529 961 9000	ELKO 2200UF 20% 35V
C 40211	84529 961 9000	ELKO 2200UF 20% 35V
CT 40015	83010 038 5800	SMD TRANS BC858B
CT 40020	83010 038 5800	SMD TRANS BC858B
CT 40025	83010 038 5800	SMD TRANS BC858B
CT 40030	83010 038 5800	SMD TRANS BC858B
CT 40101	83010 058 1700	SMD-TRANS.BC 817-25
CT 40215	83010 048 4800	SMD-TRANS.BC 848 B
CT 40220	83010 048 4800	SMD-TRANS.BC 848 B
CT 40225	83010 048 4800	SMD-TRANS.BC 848 B
D 40213	83097 200 4300	Z DIODE 4,3 C 0,5W
D 40224	83092 150 4500	DIODE 1N4148
D 40226	83091 985 4200	DIODE BAT42/43/BAT85/86 A
IC 32930	83051 474 1900	IC DPL3519A-PO-A2 DIP52
IC 40070	83053 372 6500	IC TDA7265 SGS
IC 40080	83053 372 6500	IC TDA7265 SGS
IC 40200	83053 372 6500	IC TDA7265 SGS
L 40002	81405 052 4900	DR A AX-GA 10UH 10%
Q 40012	83824 391 8600	QUARZ #439-9 18,432MHZ 12
R 40037	⚠ 87011 210 2500	KSW SI B 10 OHM 5%
R 40061	⚠ 87004 290 1700	KSW NB 0207 4,7 OHM 5%
R 40063	⚠ 87004 290 1700	KSW NB 0207 4,7 OHM 5%
R 40066	⚠ 87004 290 1700	KSW NB 0207 4,7 OHM 5%
R 40068	⚠ 87004 290 1700	KSW NB 0207 4,7 OHM 5%
R 40106	⚠ 87322 919 8600	DRW 4 0,27 OHM 10%
R 40241	⚠ 87004 290 1700	KSW NB 0207 4,7 OHM 5%
R 40242	⚠ 87004 290 1700	KSW NB 0207 4,7 OHM 5%
T 40105	83022 170 9500	TRANS BDW94B STM

POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
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ÄNDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION

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